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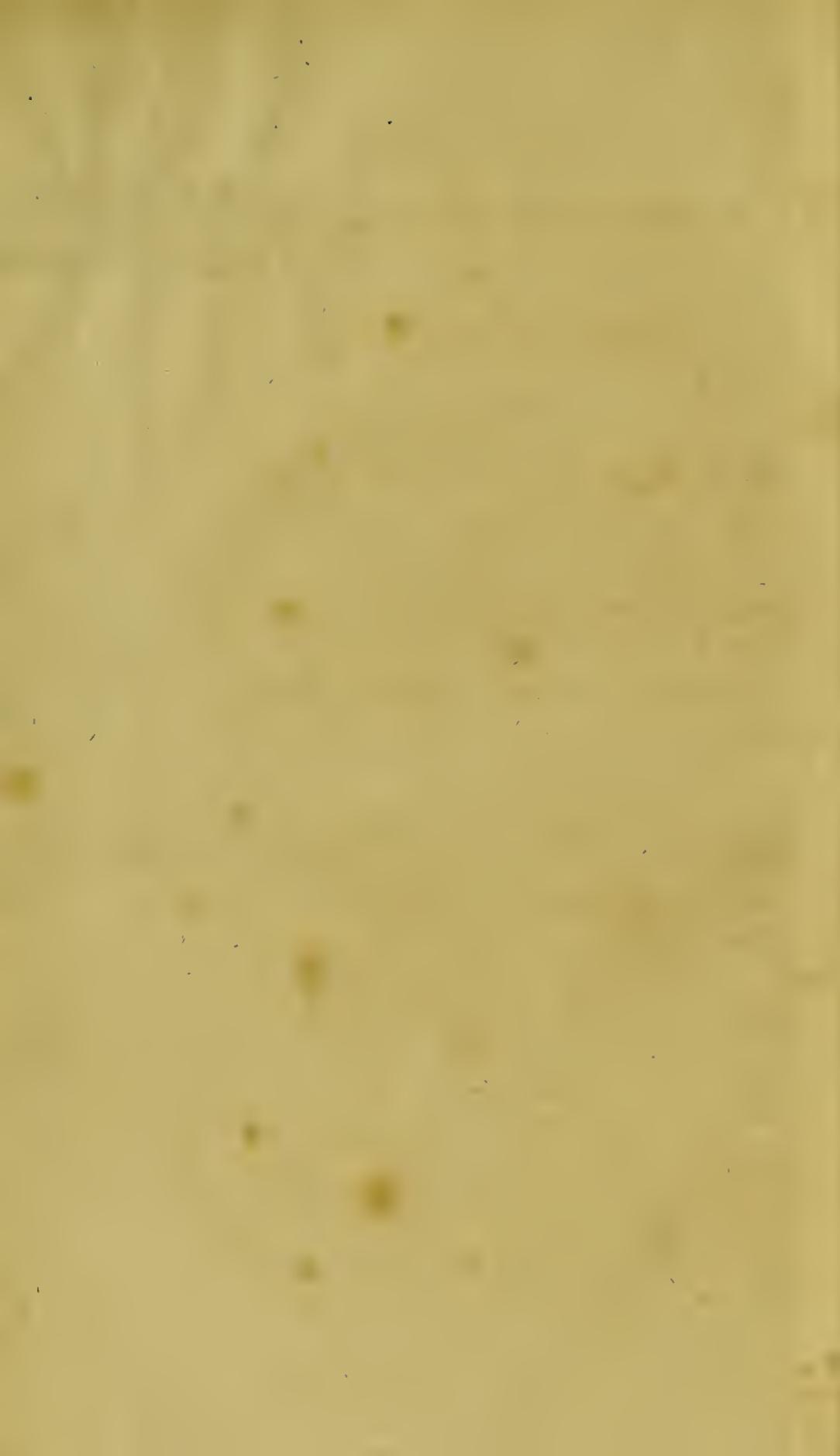




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W. M. Donall



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AN  
ENTIRE, NEW, AND ORIGINAL WORK;  
BEING A  
COMPLETE TREATISE  
UPON  
S P I N Æ P E D U M;  
CONTAINING  
SEVERAL IMPORTANT DISCOVERIES.  
ILLUSTRATED WITH COPPERPLATES;  
EXHIBITING THE  
DIFFERENT SPECIES OF SPINÆ.

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BY HEYMAN LION, CHIROPEDIST.  
ח'ס בן ל'ב

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## P R E F A C E.

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I DELIVER this Book to the world with all the diffidence and anxiety natural to an author, on publishing his first performance. The time I have employed, and the pains I have taken, in order to render it worthy of the public approbation, it is perhaps prudent to conceal, till it be known whether that approbation shall ever be bestowed upon it.

WHEN first I resolved to devote my time and attention to the treatment of Spinæ pedum, formerly called Corns, I observed with regret, that no material instruction had hitherto been derived from authors, though many had touched a little on this subject: therefore I endeavoured, for my own improvement, from observation, to state whatever I thought conducive to its advancement; as the pain

A

arising

arising from Spinæ, which grow upon our feet, is often so great as entirely to incapacitate the person who has the misfortune to be afflicted with them, from performing such duties as his station in life requires, or from taking such amusements, recreations, and exercises, as are necessary for preserving his health, or contributing to his happiness.

To enjoy and improve health, is the object of mankind in every sphere of life; and it is well known, that nothing tends more completely to effectuate this, than walking.

How anxious then is every person to indulge in so necessary an exercise, especially when possessing general good health! only perhaps feeling an inconvenience from Spinæ pedum, which do not in the smallest degree either impair the animal functions, or blunt the natural appetite, farther than from the irritating pain which prevents the man of health from freely enjoying the necessary exercises, without which the body must soon become subject to obstinate diseases.

THE

THE inconvenience attending this, may be easily conceived by him who is unfortunately attacked with Spinæ ; as he, instead of walking freely upon the street, is necessitated to choose the plainest path, and to guard with attention against irregular paths, owing to stones, &c. Should he accidentally place his foot upon any irregular body, particularly when a Spina is upon the sole of his foot, it gives a general shock to the system, and is calculated to distress the person in the most severe manner. He who labours under a violent disease, instead of inclining after any of these exercises, has his mind solely bent upon the great *desideratum*, Health ; and feels no inconvenience in being secluded from society, nor from the pleasures of walking.

I FOUND it no small advantage to have observed, and thoroughly considered, these things, before I sat down to write ; for thereby I was made sensible, that my business was to explain and describe whatever bore any relation to the original complaint. I have endeavoured to reduce this work into three different

different heads; *viz.* argument, reasoning, and experience. I am truly astonished, that Hippocrates should have discovered and treated almost every disease to which the human body is subject, and yet have totally overlooked this singular substance. Likewise, that Harvey, who rendered himself famous by discovering the circulation of the blood, should have overlooked this complaint. This, indeed, is a great and essential discovery, which not only placed physic in a more rational and conspicuous point of view, but likewise proved highly beneficial to mankind; conveying to his cotemporaries new and important information. It is indeed exceedingly astonishing to me, that philosophers, of such penetration, should have dived into the secrets of such discoveries and experiments, and skimmed over the surface, without discovering something concerning Spinæ pedum, the subject of my Essay. This, however, is a fact, not more singular than true, that they have not thrown the smallest light upon this subject. I, however, have, for a great number of years, been employed in finding out the nature and cauies of these excrescences,

cences ; which has cost me much trouble and attention, as such a difficult task commonly does cost him who makes the first effort to reduce any subject of the kind to a systematic form.

NOTWITHSTANDING the simplicity of this complaint, it has been a constant and uniform consideration with me, that there was a *somewhat* which, if properly investigated, and fortunately discovered, might tend to unravel a secret, and would open a field in which the successful practitioner, and accurate observer, might bestow much labour, which would be found useful to mankind.

ACCORDINGLY, I have taken particular pains, and bestowed much attention, in planning, and spared no expence in cultivating, this subject, in which I have made many improvements, and discovered different species of Spinæ pedum ; each of which has become the subject of a complete Essay.

LIKewise, I have pretty fully delineated the nature and substance of these excre-  
cences ;

cences ; and have discovered a singular kind, which I denominate Spina fibrofa, to which species many of our fellow-creatures have fallen victims.

BESIDES, I have not only discovered the nature of the disease, but the cure of it.

WHAT is likewise of much consequence, I have answered the general question respecting the symptoms of Spinæ pedum, which are sometimes easy, and at other times painful ; a subject which no philosopher, or chemist, ever explained in so clear a manner as I have done.

I HAVE likewise mentioned all the remedies, which are called either Radical or Palliative Cures.

AUTHORS who have discovered the causes of certain diseases, are deserving of approbation ; but who is it that has ever offered a complete preventative to every, or even to any particular disease ? Such discovery is considered as impossible. I however do not only

only state the causes and cures of Spinæ, but have discovered a complete preventative, which, if attended to, will prevent the troubles occasioned by this disease during life.

I HAVE particularly illustrated in this Work, the subject of the nails ; have arranged them in three different orders ; and have discovered the fountain from whence they derive their nourishment.

I AM convinced that this Book will meet with the approbation of mankind in general, as, perhaps, since the discovery of printing, no system of more utility than the present has been offered to the world.

IT not only concerns medical men, but is well adapted, from the simplicity of its style, and order of its arrangement, to every family who may be troubled with Spinæ.

ALL the trouble and pains I have taken and bestowed upon this Work, were done for the comfort of my fellow-creatures.

EVERY

EVERY author who has favoured the world with his system, has been greatly aided by consulting authors, both ancient and modern, upon the subject. But I was left in a state of darkness, with regard to the aid of others ; and had no monitor or assistant, but my own understanding and experience.

IN treating of facts which never before were known, the author is necessitated to be both very circumspect and candid, as his productions are not only a partial deviation from the theories and systems of others, but a complete classification of new ideas and terms.

My ideas may not only be considered different, but new ; and the terms I have chosen for distinguishing the different species of Spinæ, seemed to me both more expressive of, and applicable to, a subject which I alone have been at pains to investigate : and therefore, as the author of an original system, I considered myself authorized to adopt such names as, in my judgment, seemed best adapted

adapted to render the subject of my system most conspicuous, in point of order and good sense.

I HAVE, moreover, illustrated the Work with Plates, which exhibit different Spinæ, and Nails as taken from nature.

I HAVE likewise shewn the exact position in which both Operator and Patient should sit, in order to operate properly.

BESIDES, I have delineated the Instruments used by me in this operation ; all of which will tend to render the Work more complete.

IN fine, I have given such directions as I always found most salutary, with regard to the proper manner and season for bathing the feet ; and have pointed out several errors to which people were liable, from an improper management of this.

LIKEWISE, I have particularly prescribed certain rules for Military Men, which will be

found extremely useful to them, and, if properly attended to, secure them from uncomfortable accidents ; which will add still farther to the utility of the Book.

I OUGHT however to make an apology for the style, which is not so good as perhaps might be expected ; but as I am a native of Germany, it may therefore be excused.

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## INTRODUCTION.

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BEFORE I begin to treat on Corns in general, I judge it necessary to describe the nature, substance, and causes of these excrescences, which are such general diseases amongst mankind in every quarter of the globe. They have been neglected by authors of the most distinguished merits, who are highly eminent in treating and elucidating other diseases; which, however, has not prevented the vulgar from feeling sensibly the severe pain attending such a complaint, nor debarred them from speculating among themselves, and inquiring at others, the causes of these excrescences. This was the ancient, and continues to be the modern question to practitioners, What is a Corn?— In my practice, it is a general question, What is a Corn? Likewise, it is asked me, From what does a Corn originate? or, What is the cause

cause of its being more painful at one time than at another?

IN the beginning of my practice, to answer these questions satisfactorily, was a difficult matter for me. I then, to satisfy myself and my patients, consulted the most distinguished medical, chemical, and literary men upon that point, and inquired at them the causes of these transient pains, produced by these excrescences called Corns: but each of them gave me a different opinion. For a Treatise on this disease, I examined all the booksellers shops and libraries, but without finding any thing worthy of notice, either ancient or modern, written on it. Left in this dark state, I entered upon the study of medicine without any intention of practising either physic or surgery more extensively than I did before, but merely from a duty which impelled me to understand the frame, functions, and various vessels, composing the human body.

AT a very early period of my study, I, by attention to books, both ancient and modern,

on the subject of surgery and physic, learned all that the authors knew of Corns. By constant application in this way, my curiosity was excited, and I became gradually better acquainted with the nature and consistence of a Corn. The most ancient as well as the latest authors I consulted with perseverance, attention, and accuracy: but the result of my labour was not much, as they seem merely to have copied from one another. Whoever has been so kind as to add any thing new, has spoken merely from supposition, without throwing any additional light on the subject.

I HOWEVER, without the aid of any author on this interesting subject, deemed it proper to pay very minute attention to the nature of this excrecence: and every day produced, as it were, a new phenomenon; by attending to which, I became more and more acquainted with the singular nature of this substance, and was truly astonished that no author had investigated this most common complaint, which will be found the greatest curiosity perhaps on the human body.

IT was the ancient, and continues to be the modern doctrine, that this excrescence is produced by friction or pressure. But the hypothetical reasoning of such physiology I shall, in the sequel, prove by experience alone, without having recourse to any theory or vain speculation, without critically overturning the doctrine of others, or combating the received opinions by theory ; which only serves to embarrass the mind, and retard improvement in this, as in many other complaints, and would not edify my readers. But I shall attempt to set aside all their ingenious speculations by experience, which is the mother of improvement ; and from the most extensive practice that ever any medical man could boast of in Europe, in this particular disease. Every branch of medicine has been the subject of eminent and ingenious medical men ; and all their dissertations and works have had the most happy effects of more completely investigating the subject. But from duty, without any assistance from others, I am prompted, and bold to treat a disease entirely new in the annals of medicine ; which will, I hope, be found

found useful, and lay the foundation for succeeding practitioners to enlarge on. Difficult as such a task may appear, I shall, from extensive practice, and accurate observation and study, undertake to throw light on this very obscure subject, and clearly prove to my readers and the world, what a Corn is—its cause—and point out the mode of its prevention ; which have eluded the most learned physicians, who, nevertheless, are often subject to them. I am now thoroughly convinced, that it is improperly termed a Corn ; and therefore, for evident reasons, see the propriety of using another name, *viz.* *Spina pedum* \* : the nature and consistence of which, I shall, in the sequel, define, and prove the propriety of the term, which I judge more applicable ; and which I shall reduce to the four following orders :

1. *Spina pedum hereditaria* ;
2. *Spina pedum pressa* ;
3. *Spina pedum projecta* ;
4. *Spina pedum fibrosa* ;

\* The reason for giving it the name *Spina pedum*, is, that *spina* signifies *a thorn*, and *a thorn of the feet* seems pretty applicable.

each of which I shall discuss in order. Before I proceed to describe the Spinæ pedum hereditariæ, it will not be improper to give a slight sketch of the anatomical structure of the human foot and toes.

THE toes on each foot are five in number: a principal part of their composition is bone. The great toe has two bones, which are much thicker, and, in proportion to their length, far stronger, than the bones of the other toes. It is admirably well adapted for bearing a much greater degree of weight upon it, or for sustaining more force acting against it, than any other toe. Accordingly, the chief weight of our body, when walking, is alternately placed upon each of the great toes, when, at each step, we raise ourselves on our tiptoes; and almost the whole force with which our body pushes the foot forward, on its touching the ground, and before the rest of the foot gets any share of our weight, is also alternately sustained by each of these toes. Each of the other four toes has three bones; which, in each of the four toes, are less and smaller, in proportion

tion to their lengths ; their bases are considerably stronger than at their exterior ends ; their bodies are narrower above than below, and flatter on the sides. The first phalanx is proportionally much longer than the bones of the second and third, the latter being very short. The toe next to the great one, has, of the four, the longest bones in all directions, and more externally the toes are less. The little toe, and very often that one next to it, have the second and third bones almost united into one ; which is probably owing to the great pressure they are subject to, and the little motion they have. All the toes have various muscles, which enable us to extend any toe, to bend any joint of any toe, or to pull any toe from, or draw it nearer to the rest of the toes at pleasure. They are also furnished with numerous arteries, veins, lymphatics, and nerves, which are of great use ; but which, as well as the various ways in which they are branched, need not be mentioned here.

THESE bones, muscles, &c. are in common to the foot with the rest of the body ; and they,

in every part, evidently shew forth the Creator of man to be most wise and beneficent.

THE toes, besides the teguments which they have, that are common to them with the rest of the body, have, at the extremity of each, a nail.

I SHALL now proceed to point out the particular seats of Spinæ pedum. They are seated every where under the nail of the big toe, at each side of the nail in the fleshy part, and on the last joint towards the nail of this toe.

To make my description more simple and intelligible to my readers, they will be pleased to remember, that when I mention, in the sequel, the first joint, it is towards the foot, and the last is always towards the nail.

SPINÆ grow on the second joint of the inner side of the great toe, externally on any part of the same toe, and on the inferior part of that toe, to the first joint; likewise, on all the four smaller toes. They are seated at the points

points of the nails, on the inner side; and externally towards, but not farther than, the second joint of the three middle toes: But there are none on the under-part of these small toes. The little toe, however, is more subject to Spinæ pedum than the other small toes.

FROM the first joint to the very point of the nail, they grow over the whole surface. Particularly, there grows a Spina between the little toe and its fellow, close to the integuments covering the metatarsal bones.

IT is needless to mention particularly every part of the sole of the foot where they grow, as no part of it is exempted from them, except the under-part of the heel; the posterior part of which, however, is subject to them.



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## SUPPOSED CAUSES OF SPINÆ PEDUM.

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I NEVER could be convinced that a Spina pedum was occasioned by either friction or pressure, though it was, and still continues to be, the prevalent opinion of mankind in general.

LET us, for a moment, consider the change which immediately takes place after the age of maturity. Instead of being disposed to imitate the fashions at the expence of an injury, we, on the contrary, adopt such modes, and practise such measures, as are conducive to health, ease, and comfort: Consequently, instead of tight shoes, we, for ease and comfort to our toes and feet, use them more loosely, and avoid tightness.

HENCE

HENCE we should be led to suppose, that we would have Spinæ pedum on the soles of our feet, because we now wear wide shoes; and none on our toes. I find however, that these people who wear wide shoes, have Spinæ pedum on the toes, and sometimes none on the soles. It may then be argued, that they have had these Spinæ on their toes, from tight shoes in youth, before they arrived at maturity.

GENTLEMEN from the country, who have been under my care, have told me, that they had Spinæ pedum on the soles of their feet, when young and fashionable, which, from their feet being often wet, while hunting and fishing, have disappeared; and they have been free from Spinæ for years, till they came to reside in town, where they have not been six months till I was consulted, to extract them.

THAT tight shoes, or pressure, have been, and still continue to be considered the cause of Spinæ pedum, by medical men as well as others, in every age, is a fact. Therefore, to handle

handle this doctrine with propriety, it is requisite that we should first examine the arguments in its favour, and then demonstrate the error of such hypothetical reasoning, by stating evident contradictory facts.

LET us now observe the motions of our steps, when walking. In making the first step with either foot, the heel of the advanced foot first touches the ground; and when we touch the ground with our toes, the other heel assists: consequently, the whole weight of our body is almost on the heel alone, the other part of our foot being much assisted by the other foot.

THEREFORE, if pressure be the cause of Spinæ, the whole under-part of the heel would naturally be more subject to them than any other part. But, on the contrary, there is never a Spina to be met with on that part; at least, in my practice, I never have seen any; but on the posterior part of it, I find Spinæ, where the pressure is incomparably less.

SOME

SOME people use, for the sake of tightness, ligatures, to bind the mouth of their shoes more neatly around their feet, by which means the pressure is considerably greater there, than on any other part of the feet; yet there never was a Spina on these parts where the ligature is placed, nor callosities of any kind, arising from that pressure.

AGAIN, when we wear buckles, which, for fashion's sake, we bind very closely on our feet, to such a degree that the corners of them often wear holes in our shoes and stockings; nay, sometimes the buckles are rendered thinner by the pressure; yet, on that part of our feet, there never is found a Spina.

THE pressure, on these parts mentioned above, is considerably greater than that on our toes; why then does it not follow, that, on these parts where the pressure is greatest, Spinæ do not grow, as well as on the toes, where the pressure is by no means so great? It may perhaps be argued, that the toes have more joints, and are more subject to motion, than

the

the other parts of the foot, and hence may be considered the cause of pressure. On the contrary, on the upper part of the three middle toes towards the foot, where the motion is greatest, there never grows a Spina.

INSTEAD of this, I uniformly find Spinæ most common on those parts where the pressure is least; though a person may think otherwise, because when he has a Spina on any part, he thinks the pressure is greatest on that particular spot; and in reality he judges right, as the pressure there is greatest: For where the Spina is seated, there is a little inflammation and swelling; and the Spina itself is a hard substance, which rises above the surface, and consequently is more liable to be touched by the shoes, which always tend to irritate it, and thus produce more pain there than on any other part of the foot where there are no Spinæ.

PERHAPS, on the same spot of the other foot, a person may not have a Spina; therefore does not feel any more pain there than on any other part of his foot.

IT surely cannot be said, that pressure between the toes can be so great as on the parts above mentioned ; yet we find Spinæ seated there on almost every part.

IT may be said, that the four lesser toes rub on each other, and that the projecting joints rub on the fleshy part of the other toes ; which may be supposed the cause of Spinæ growing there. If so, why should there be a Spina on the fleshy part, between the joints of the big toe and its fellow, where the pressure cannot be great, as they exactly coincide ?

LET us now attend to the shoes of women in general. They are accustomed, for fashion's sake, to wear their shoes more tight and pointed than men ; yet I do not find more Spinæ on the feet of the former than on those of the latter.

I REMEMBER when it was the fashion for women to wear high-heeled shoes, and, on the contrary, when they wore flat ones ; surely then

then the pressure on the toes from the high heels, must be more severe than from the flat-heeled shoes ; because, in the former, the foot slips down towards the point, consequently the pressure is considerably more severe on the toes, than in the flat-heeled shoes.

LITTLE women commonly wear high heels ; and their walking is different from those who wear flat heels. Let us observe the motion of their feet who wear high heels. At the first step, they touch the ground with the toes and heel at once, and always in a stiff manner, with a bent knee. Now we would naturally suppose, that these women would never fail to have Spinæ on the under-part of the foot towards the toes, as the pressure on that part is most severe. I can say with certainty, that I never found any difference ; and there are many who never had Spinæ on their feet, though they never wore flat-heeled shoes. If pressure therefore were the cause of Spinæ, they never would be exempted from them. I have however extracted a Spina from the posterior

posterior part of the heel, where the pressure is by no means so great.

To convince the world that pressure is not the cause of Spinæ, I shall here state a very remarkable case in proof of it.

A LADY, from the West Indies, brought with her a black servant, who applied to me to extract his Spinæ, agreeably to the order of his mistress.

WHEN I saw his foot, it astonished me when I observed no toes. I asked him, how his foot happened to be in that condition? He told me, that the cold was so severe when he came to Europe, that his toes were frost-bitten, and had fallen off. When I examined his foot, I found Spinæ seated on the integuments of the metatarsal bones, whence the toes had fallen off.

I THEN examined his shoe, to see whether or not pressure could be considered the cause of these Spinæ. His shoe was made to fit his foot according to its natural size. I asked him,

him, if he thought pressure could be the cause of his Spinæ? He answered, that on every other part of his body he could bear pressure: but on that part of his foot whence his toes had fallen off, he could not suffer pressure of any kind; to prevent which, he put tow into the point of his shoe, and cotton towards his foot, in order to keep it easy. It is evident, that pressure could not be the cause of these Spinæ; therefore we must seek some other cause: and it is clear, that they must either have originated naturally, or were, as is often the case, hereditary.

To establish more fully my doctrine, *viz.* that pressure is not the cause of Spinæ, I have extracted several from the hands.

PARTICULARLY, I have extracted from a nobleman, a Spina, seated in the palm of his hand; and, likewise, another, from the hand of a player.

THEREFORE I am convinced, that pressure cannot be the cause of Spinæ; and must endeavour

endeavour to assign some more evident cause.

HAVING now considered the effect of pressure, and demonstrated fully the insufficiency of such pressure to produce Spinæ, I proceed to describe the effect of pressure on other parts of the body, where it is more severe than on the feet.

YET on these parts which I shall now mention, there never has been seen a substance resembling a Spina. If pressure then were the occasional cause of Spinæ, we might suppose that on these particular parts they should naturally be seated; because pressure there is much more powerful than on our feet, as we shall shew in the sequel.

WE shall now proceed to remark progressively the effect of different kinds of pressure, from the feet upwards.

A POSTILION continues to ride from stage to stage, for days, months, or years. Every person

person is acquainted with the posture of a postilion, while, on horse-back, he is driving a carriage. The pole continues to rub incessantly on his right leg, which irritates it very much. Though the friction is often so great, that he is under the necessity of having an additional piece of leather on his boots, to preserve, in some measure, his leg from it, yet there never has been seen, on that part of his leg, any such substance as a *Spina pedum*.

LET us now attend to the pressure on our knees, occasioned by leathern breeches, which, for fashion's sake, are made so amazingly tight, that we cannot button them with our fingers, but are obliged to use an iron instrument, to draw the buttons into the holes.

LIKewise, women sometimes tie their garters so very tight round their legs, that a deep impression is occasioned; which has often surprised me, that the circulation was not thereby very much impeded.

AGAIN,

AGAIN, women, who are in the habit of wearing stays, frequently lace themselves so closely, that the powers of inspiration and expiration are very much impeded.

IF I were to agree with the general opinion, that pressure is the cause of Spinæ, why should there not grow Spinæ on those parts where the pressure is considerably greater than on our feet, but where not even so much as a callosity has been produced by that pressure?

I SHALL now mention different pressures producing excrescences.

As the husbandmen are obliged to hold the plough the whole day, the hollow of their hands is almost wholly covered with excrescences.

LIKewise the gardener, who handles the spade, has excrescences on them, to as great a degree as the husbandman. Mowers and reapers, whose labour is but of short duration,

tion, have yet, from the severity of the pressure, an excrescence produced on their hands.

A TAILOR, who only handles the scissors occasionally, never fails to have an excrescence produced on that part where the pressure is applied.

A BLACKSMITH, likewise a mason and a wright, are all subject to the same excrescences.

AGAIN, a packman, who travels through the country to sell his goods, has always, where the belt presses upon his shoulder, and where the pack lies on his back, excrescences produced.

PORTERS and chairmen likewise are subject to them, from pressure: Besides, a variety of others, which it is unnecessary to enumerate, are subject to the same excrescences.

Now, if even on these places mentioned above, there had ever been seen a substance

similar to a Spina pedum, I should agree with the general opinion, *viz.* that pressure is the cause of Spinæ.

ON the contrary however, I can assure the reader, that there never has been seen any such substance as a Spina on these parts.

SOME, however, refer the cause of these Spinæ to new shoes. When a person thus puts on these shoes, he very soon feels pain ; which causes him examine the part, where he finds a Spina : therefore instantly supposes, that the new shoe's are the cause of the Spina.

BUT this person is perhaps too rash in his conclusions, as he undoubtedly had the Spina formed previous to this period, though it did not give any pain, and therefore had not been observed. Indeed, unless pain is felt, people seldom examine their toes or feet.

WE shall now consider a pamphlet published in France, by Monsieur La Forest, Operator to

to the Royal Family, who has been kind enough to furnish us with his theory on the cause of Spinæ pedum ; which is as follows :

“ THE cause of Spinæ is ascribed to a thick  
“ and viscid humour in the pores of the skin,  
“ which is rendered hard by constant pressure,  
“ and finally forms a callous substance,

“ PLATERUS pretends that these excres-  
“ cences are produced by the lymph, or ali-  
“ mentary fluid, which is designed for the use  
“ of the skin, but is detained in the pores,  
“ and rendered hard by constant pressure.

“ ACCORDING to the opinion of Lauvau-  
“ gion, the cause of Spinæ pedum appears to  
“ arise from the laceration of the nervous fila-  
“ ments \* of the rete mucosum, or the plexus of  
“ the skin ; and, in that case, the lymph, which  
“ continually oozes out from their points, coa-  
“ gulates under the epidermis, and through its

\* By this, the author probably means nothing else than the lymphatics, so as by alimentary fluid, he alludes to the lymph.

“ inspissation, forms the substance of Spinæ pedum. This opinion is not only probable, but it also corresponds with what I have found in my own practice (says La Forest), as far as I have been able to reflect upon it with accuracy ; for I have never found any other true Spinæ, but such as were situated either on the joint of a limb, or on the point of it.

“ I CONCLUDE from this, that the cause of Spinæ is the same with that of the Callus. It is a pressure, or friction, which was the occasional cause of them ; with this difference however, that constant pressure is the more frequent cause of Spinæ pedum : As, on the other hand, the Callus arises from friction, as they commonly attach themselves to the epidermis ; and if they have taken place in this part, then the constant pressure in the lower part of the skin against the upper part of the bone, causes a sensation of pressure, which afterwards is the cause of laceration. Of this we may convince ourselves.” Such are the opinions of these authors.

HAVING now stated all the pressures and frictions on the various parts, from the foot over the whole body, I shall now proceed to shew, that neither pressure nor friction are the causes of Spinæ pedum.

LET us now attend to the form of our shoes. If a shoe fits exactly, or is very tight, or too wide, the pressure on the soles of our feet is the same. If pressure therefore is the cause of Spinæ pedum, we would never be free from them on the soles of our feet, as the pressure there is not only great, but constant. There is a material difference amongst mankind in their mode of walking; some laying the whole pressure on the outer sides of their feet, the inner sides, on that account, being kept quite hollow from the ground: Others, again, support the weight of their bodies on the heels, and the soles towards the toes, whilst the middle part seldom or never touches the ground; which is generally called a Straight Foot.

IF pressure then be the cause of Spinæ pedum, we should always find them on these parts

parts where it is most severe. On the contrary, however, I find them on the hollow of the soles, when there are none on the oppressed parts. Surely these cannot be from pressure.

THERE are some people, on the contrary, who have plain soles; and are, therefore, commonly called Flat-footed. I myself have feet of this description; and with certainty can say, that I never was troubled with Spinæ on the soles of my feet, nor a callosity: On the contrary, they are softer than other people's feet, who have, what are called, Straight Feet. Neither have I ever seen them on the soles of others who have similar flat feet, who came under my care. I do not by this affirm, that I never had Spinæ: I had three on one foot; two of them were upon the toes, and the other betwixt the toes on the same foot; whilst my other foot never was afflicted with them, nor even with a callosity of any kind.

IT may now be argued, that these three Spinæ were produced by tight shoes. Let us consider

sider the reason of our wearing a tight shoe. Surely it is, that we may have a neat foot. Suppose we have a tight shoe, is it possible that our foot would, on that account, become neat? On the contrary, a tight shoe would have an opposite effect; for as we naturally walk awkwardly, we would, from a tight shoe, walk still much worse. Therefore we cannot adopt a better plan, to give ease and comfort to ourselves, than to use wide shoes, which render our walking more agreeable in every point. I myself, to prevent the mistake of the shoemaker in making me too tight shoes, and for the sake of keeping the pressure on my feet always alike, keep always two lasts, the one somewhat larger than the other. Upon the largest last, I have my winter-shoes made, as I, in this season, always wear worsted-stockings and socks. On the small last, I have my summer-shoes made, as I then wear cotton-stockings, which are thinner than the former. Surely, then, no person can imagine that pressure was the cause of my Spinæ. If so, why was my other foot free from them?

AGAIN,

AGAIN, if pressure be the cause of Spinæ, why should we have them between the big toe and its fellow, where the pressure is infinitely less than on the outer side? I do not say, that the outer side is exempted from Spinæ; but I find twenty on the inner, for one on the outer side. Again, betwixt the little toe and its fellow, there grows a Spina upon the integuments, close to the metatarsal bones. If pressure then be the cause, why should there not be Spinæ on the outer side, where the pressure is more severe?

I HAVE now fully stated the arguments in favour of the commonly received opinion; and, as I think, demonstrated, in the clearest manner, the mistaken notion by facts, which, while they tend to invalidate the old doctrine, at the same time convey, in the most powerful and impressive manner to the mind, the impropriety of such hypothesis, as that Spinæ are produced by either friction or pressure.

WE shall now consider the arguments adopted by Monsieur La Forest, concerning

the

the causes of Spinæ pedum. As he has favoured us with nothing of his own, but merely transcribes from Platerus and Lauvau-gion, their arguments shall now be considered.

FROM the language of Platerus, I do not deny that he was a learned and accurate anatominist; but sure I am, that he has had little or no experience in the mode of extracting, or otherwise treating Spinæ pedum, or he must at once have been convinced of his own hypothetical reasoning. He says, that these excrescences are produced by the lymph, or alimentary fluid, which is designed for the use of the skin, but is detained in the pores, and rendered hard by constant pressure.

I SHOULD willingly agree with the above, provided he had given me a more clear and demonstrative proof of the validity of his opinion; *viz.* that the lymph detained in the pores, by constant pressure, produces Spinæ.

WHY do Spinæ happen only on these particular parts of the toes, as above described, and

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not

not on other parts of our body, where I have clearly demonstrated the pressure to be more severe, and where the lymph is in as much abundance as on these parts where Spinæ are commonly seated?

SPINÆ, therefore, evidently appear to originate from some other cause than the above; or we would naturally have these troublesome excrescences on several other parts.

THE opinion of Lauvaugion is fully similar to that of Platerus; only he says, that Spinæ are produced by a laceration of the nervous filaments, and the oozing out of the lymph, which coagulates, and consequently lays the foundation for these excrescences.

I MAKE the same objection to him as I have done above to Platerus. I shall however consider his doctrine more fully, when I come to treat of the Substance of Spinæ pedum.

As for La Forest, I have no inclination to say much either for, or against him, as his pamphlet

pamphlet is merely a combination of incorrect fragments of the labours of others, without containing a single sentence of judicious reasoning originally his own. I therefore lay him aside, without acknowledging that I have derived any advantage from his description.

TRUE CAUSES  
OF  
SPINÆ PEDUM.

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HAVING now described all the supposed causes of Spinæ pedum, and, in a cursory manner, stated a few objections to them, I proceed now to state, in a more full and satisfactory manner, the true cause of Spinæ, which will be found to differ from that of every other who has written on this interesting subject.

IN the beginning of my practice, I entertained the common opinion; at which the reader need not be surprised, as I was not trained up to such a branch, by serving an apprenticeship, or studying, in early life, at an university, by which means men become acquainted with, or expert in, the business they intend

intend to prosecute. On the contrary, I entered into practice without any monitor but my own judgment, and steadiness; and was, at that time, convinced of the common doctrine with respect to the causes of Spinæ.

AFTER practising for a considerable time, and attending a number of patients who were afflicted with Spinæ, I began to revolve in my mind the common doctrine, which I by no means could fully admit.

BESIDES, I often found, in the course of my practice, Spinæ seated on one foot, while the other was free from them, which caused me believe that the doctrine was objectionable, and that there were undoubtedly more evident causes to be assigned for them.

BEFORE I adopted my own sentiments, I used every method possible to assist my ideas, by carefully examining my patients, if they could assign any reason for having Spinæ on the one foot, and none on the other. Some could assign no reason; others said, that their right foot

foot was larger than the left, which they considered the cause of their Spinæ. But I find them seated on the left, when there are none on the right foot. I was still dissatisfied with myself, and could not rest contented, as I was amazed that these Spinæ were seated only on particular parts.

I THEN was consulted by a lady, who was afflicted with Spinæ on both feet, which I accordingly extracted. She told me, that she had a daughter, who likewise was troubled with Spinæ, which I found seated on the very same spot as those of the mother. This afforded me some instruction; but I continued my practice for a considerable time, without finding the true cause of these excrescences. I, however, never neglected to interrogate my patients, if they could inform me whether or not their parents were afflicted with Spinæ? Some of them did not remember: But others gave me the most satisfactory information; and assured me, that both parents were plagued with them, particularly their mother.

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As I have been fully convinced for a considerable time, and have above clearly proven, that Spinæ are produced neither by friction nor pressure, I shall therefore go on to state, agreeably to my firm belief, that Spinæ either grow naturally, without any evident exciting cause, or, what appears to me more probable, are hereditary. To establish more fully my doctrine, I shall here relate several remarkable instances of the truth of my observation, or as authors, less diffident than myself, would say, of my discovery.

I WAS consulted by a gentleman, to extract a Spina seated on the outer side of the little toe. I was then employed by his lady, to extract six Spinæ from her feet. I, at the same time, extracted Spinæ from a son and daughter, who had them seated on the very same spot as those of the mother. In the course of time, their family was increased to six children; all of whom I have had under my hands, and have uniformly found that they inherited their Spinæ from their mother.

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I SHALL mention another remarkable instance. I was consulted by a gentleman, in a hotel, to extract Spinæ ; and when I had done, he desired me to stop a little, as there was another gentleman who needed my assistance. When I took the foot of the other in my hand, and examined his Spinæ, I immediately looked them both in the face, which was indeed rather unpolite. They asked me, for what reason I looked. I answered, "According to your Spinæ " pedum, I should think that you were either fa- " ther and son, or brothers." The one was con- siderably more advanced in life than the other, which indicated that they were father and son, rather than brothers ; and they were truly surprised that I was so acute as to judge, from their Spinæ, that they were so connected, and acknowledged that they were brothers. I then inquired at them, if their parents were afflicted with Spinæ ? They said, that as their father died when they were very young, they could not say for him ; but assured me, that their mother was so very much perplexed with Spinæ, that they prevented her from walking.

I SHALL

I SHALL now mention several remarkable instances in children. I have frequently been employed in gentlemen's families, to extract Spinæ from children, not exceeding two years: and have found them on both feet, and deep-seated; nay, in every sense, as severe as if they had been taken from a person of fifty years.

I WAS consulted by a lady, from whose foot I extracted a Spina pedum. This lady has five children. From the three youngest, I extracted Spinæ, the two oldest not being subject to them: The one was six years, the other four years, and the last only two years: from each of whom I extracted three Spinæ; two of them seated on one foot, and one on the other. As their father was present at the operation, he asked me, why these young children should have Spinæ, and the oldest none? Likewise, he asked me, what might be the cause that such young children should be troubled with these excrescences? mentioning at the same time, that he never was troubled with Spinæ pedum, though he used always the neatest shoes, and tightest boots—so tight,

that his toes were very much compressed ; yet he never had any Spinæ, nor any other excrescence.

HE was certain, he said, that they could not be from pressure, as he never allowed his children to wear tight shoes ; more especially, that they could not be from that cause, in his youngest child, who had never used leather-shoes.

I EXPRESSED my happiness that he was of the same opinion with myself ; *viz.* that pressure could not be considered the cause of these Spinæ in his children. Still, however, he was at a loss to know the true cause, till I convinced him that they were hereditary, with which he was satisfied ; but was astonished that the three youngest should be subject to this complaint, and the two oldest have no such trouble. The reason of this, will be found in that part where I treat of the Prevention of Spinæ pedum.

THESE few remarkable cases surely must put it beyond a doubt, that pressure is not the cause

cause of Spinæ ; and likewise convince, that they either grow naturally, or are, as mentioned above, hereditary. .

I SHALL here relate a still more remarkable case.

I ATTENDED a lady some years, who was troubled with a concealed Spina, seated on a part where it is seldom to be met with ; *i. e.* at the inner side of the little toe, towards the nail, keeping the same direction as that concealed Spina on the opposite side of the same toe, as described under the head of Concealed Spinæ.

IT is indeed a very rare occurrence at this inner side, as there may happen three or four thousand on the outer side, while there may not one happen on the inner side of this little toe.

THIS lady recommended me to a gentleman, to extract his Spinæ. When I had finished my operation, he mentioned that he often

often felt pain at the inner side of one of his little toes. By strict examination, I found that he had a concealed Spina in that part, which I mentioned to the gentleman, who expressed his happiness that I had discovered the cause of his pain ; and, at the same time, hoped that he would derive the same ease from me as his sister had done, who recommended me to him.

I WAS fully convinced that this Spina, which is so very rare, was hereditary, as I had extracted a Spina from the very same spot of his sister's toe.

IT IS, in my opinion, unnecessary to mention more cases, as the above are so full and satisfactory.

I DO NOT wish to try the patience of my readers, nor to fatigue them with description, as it would not demonstrate more fully my doctrine ; though I could describe thousands of a similar nature.

I SHALL now mention a few cases of persons who seldom wear shoes, except on the Sunday,

days, yet are subject to Spinæ ; which I find as severe, and deep-seated, as I do in those who always wear shoes.

BLACK people have Spinæ larger, and more numerous, than the White. Their Spinæ are seated exactly on the same places as those of the White. From curiosity I have examined many black persons, in order to observe if their Spinæ were, in any sense, different from those of the white people ; and found that they are, as said above, more numerous, and larger.

DIFFERENT authors, while describing a Clavus pedum, in the same sentence, mention a Clavus oculi. Whether they mean by this classification, that they are the same substances, I cannot determine ; for, in my practice, I have never had an opportunity of observing any such excrescence on the eye.

I HAVE often consulted surgeons of the highest eminence and repute, and whose practice was very extensive, if they had ever observed

observed any such excrescence in the eye? They answered me in the negative.

To satisfy my curiosity, when in Ireland, I advertised in the public news-papers, and issued hand-bills, mentioning that I extracted Clavi oculi. From the singularity of this advertisement, people, who had any complaint in their eyes, flocked to me. I found many afflicted with cataracts; but never observed any such things as Clavi oculi,

As I have been in every capital place around Ireland, and have never had an opportunity of seeing a Clavus oculi, I have therefore reason to conclude, that there is no such complaint in that country; and am doubtful whether there be any such in this island.

THOUGH, in my practice, such a complaint never occurred; yet I doubt not but there may have been such a complaint in other countries, as it is not barely mentioned by one, but by a number of learned and accurate authors, who surely

surely would not impose upon the world a falsehood. These authors, when treating of a Clavus pedum, mention, in the same paragraph, a Clavus oculi, as if they had both been of the same nature. But as they have not been so particular as to favour us with a distinct classification of the excrescences to which our feet are subject, I have reason to believe that they, in general, mean Spinæ pedum.

IF, however, pressure were to be considered the cause of Spinæ, or a Clavus pedum, no person surely would suppose that a Clavus oculi could be produced by that cause, as the eye is rarely subject to pressure of any kind.

I DO not doubt that the Chinese are subject to Spinæ pedum, as well as any other class of people in the world. But I dispute that the Chinese women are subject to them, because I have repeatedly been informed by seafaring men, who have frequently visited that nation, that the female sex, from infancy, are obliged, according to the custom of the nation, to have their feet compressed with iron shoes, in order

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to retard their natural growth ; and so much are they compressed, that, when grown up, the integuments hang over their shoes : By which means their feet are so much prevented from increasing, that when they have reached the years of maturity, their feet are no larger than those of a child of four or six years, in other parts of the world. I was favoured with the view of a shoe belonging to a Chinese lady, which was in the possession of a captain, who brought it from China as a curiosity. The upper part of it was of silk, and beautifully embroidered with gold ; and was seemingly fit only for a child of four or six years. Therefore I cannot suppose that these Chinese females can have any Spinæ pedum.

THE people to whom I am called, complain of the blankets and sheets proving troublesome to them. Surely, if the Chinese were subject to Spinæ, it would be impossible for them to enjoy a moment's ease, as the pressure produced by a Chinese female's shoe, is a thousand times more severe. I myself (and I believe several others) have seen, that a person

a person troubled with a Spina, notwithstanding of wide shoes, and the softest leather, has been forced to cut a hole in his shoe, where that Spina was seated, because he could not suffer the slightest pressure on the affected part.

NAY, I myself have frequently heard, that a person has risked the amputation of a toe, owing to the severity of the pain of a Spina, as he could not obtain even a palliative cure. Particularly, I have been informed, that military men have often been obliged to abstain from marching, and to submit to the amputation of a toe, the disease having originated from a Spina.

IF pressure is calculated to produce such torture, from our common shoes and boots, as to cause us sustain the loss of a toe ; surely all the Chinese females, who are so much compressed by their small shoes, would be obliged to have recourse to the disagreeable operation, of having not only their toes, but also their feet, amputated.

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I HAVE

I HAVE now stated pressure and friction, both of the slightest and most severe kind, and, as I think, clearly proved, that these cannot be considered the causes of Spinæ pedum ; I, therefore, hesitate not in concluding, that Spinæ either grow naturally, or are hereditary.

I WAS however called to two very particular cases, to extract Spinæ pedum from two gentlemen, who had deformed feet, commonly called Club Feet. Though their feet are thus deformed, yet they are by no means defective of any joints or toes, more than we find in a well-shaped foot ; only they walk upon the outer side of the ankle, where the greatest pressure must necessarily be applied. When I extracted Spinæ from these places, where I never before had observed them seated on a well-shaped foot, I was almost at a loss what to think of my own doctrine, as I was certain, that these Spinæ must undoubtedly have originated from pressure. This gave me no little uneasiness, as I could not reconcile these two singular cases with my former doctrine.

trine. Still, however, I was certain, that Spinæ pedum could not proceed from pressure, as I had extracted many thousands of them from places where there is very little pressure.

## CHEMICAL EXPERIMENTS

UPON

## S P I N A E P E D U M.

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TO investigate fully this subject, and to discover the real nature of this excrescence, I adopted a different plan, in order to throw more light upon it, by making the following Chemical Experiments.

BEFORE I begin to mention the chemical experiments, I must first observe, that almost every Spina, worthy of notice, which came under my management, I carefully preserved, when allowed by my patients; who sometimes, however, kept them, to shew to their friends, &c. Still, however, I have a variety of

of Spinæ in my possession, almost all different in shape; some having two roots, others only one, and some, again, having a cavity in the centre, but very much thickened round the edge. From the different shapes and appearances of these excrescences, I was led to suppose, that there was something, in their nature, which had not yet been explained; which induced me to examine them chemically, in the following simple manner.

I HAVE examined this excrescence minutely with microscopes, but without observing any thing worthy of notice. The substance of the Spina itself is quite insensible, merely inorganic matter, entirely different from every other callosity.

I THEN fell upon experiments for investigating this very singular matter. I put Spinæ, of various shapes and appearances, into vitriolic acid: Some of them were recently extracted; others had been in my possession for several years, and were quite dry. I allowed

allowed the Spinæ to remain in that menstruum twenty-four hours. I then took them out, and found them very little altered, only rendered somewhat softer. I could not distinguish the recent, from those that were very much dried.

I THEN took an equal number, as above, and put them into nitrous acid, in which I allowed them to remain twenty-four hours; when I took them out, and, on examination, found they had contracted a yellow tinge. In some, I observed that the root was entire, the callous part almost consumed: in others, I could not observe the root; but found them very much softened. Before I put these Spinæ into this menstruum, I observed that they had certain protuberances, resembling roots. I then allowed these Spinæ to remain some time in the air, by which means they soon became dry. Some of them were so much changed by the solvent, as to be pulverizable with ease; while others were only changed in their callous part, the root remaining entire.

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I WAS now at a loss how to account for this difference; *i. e.* that some of them should be rendered quite soft, others only partially so. As I, however, did not mark the recent, from those that were dry, it occurred to me, that this might be the cause of said difference.

I THEREFORE repeated my experiment, with this improvement; *viz.* marking, by means of a piece of glafs fixed into the recent, to distinguish them from those that were dry. I observed the very same proceſs as before; and, on examination, found that there was, in fact, no difference between a recent and dry Spina, as might otherwise have been expected. These Spinæ were literally the same, though others were very much softened, and no vef- tige of a root remaining; though when I put them into the solvent, every one of them had the appearance of roots. It surprised me much, to find some of them resisting the solvent powers of this menstruum, while others were so much changed in their conſistence. This induced me to suppose, that  
there

there surely must be different species of these excrescences.

I THEN made another experiment, and put the same number of Spinæ, of the same shape and appearance as the former, into aqua regia, in which they remained twenty-four hours. I then examined them, and observed no change produced upon them by this, more than what appeared obvious from the former experiments. I then allowed them to remain forty-eight hours longer, when I took them out, and found them very much altered. In some of these Spinæ, I could easily distinguish the root, though it was become pulpy, and considerably enlarged; which, however, could with certainty be considered the essence of the Spina. The callous part was almost dissolved, while the root appeared gelatinous. In others, I could observe no such substance as a root, as they were very much softened. From the above experiments, I was still more convinced of my new doctrine, which holds forth, that there are different species of these excrescences.

I WAS

I WAS of opinion that there was something yet to be learned from experiment, which induced me to put some Spinæ into warm water, to the 100 deg. of Farenheit's thermometer, in which they remained a few hours, the degree of heat being kept equal. I then took them out, and, on examination, found them very much enlarged. I again put Spinæ into the same vessel, and boiled them half an hour; when I took them out, and examined them, and was astonished at the very singular appearance which they exhibited. I found the callous part, surrounding the root, considerably thickened, whitish, and spungy. The roots however, on the contrary, retained nearly their natural hardness and colour. By examining this substance more accurately, I observed that it was composed of scales, or layers, arranged in the most beautiful and regular order, which afforded me much satisfaction. Some of them, however, exhibited a different appearance, as there was no vestige of any thing similar to root, though they were considerably enlarged, and resembled the callous part surrounding

the root of the former. This afforded me the clearest proof, that there were different species of Spinæ pedum: The one species is produced naturally, the other originating from gentle pressure.

I THEREFORE have no hesitation in affirming, that the Spina, which has its root composed of layers, is a natural Spina pedum; and, on the contrary, that that excrescence, which does not retain the root when boiled, is produced by pressure.

To put the truth of my doctrine beyond all doubt: I extracted Spinæ from children, from two years; likewise, from the hollow part of the soles of the feet, in adults, where the pressure is extremely slight.

THEREFORE I was then certain, that they were Natural Spinæ. I boiled them in water, and found them composed of layers, and retaining the shape, which constitutes a Natural Spina.

WHAT

WHAT is very singular, the layers, composing the Spinæ of a young child, are much thicker than those of an adult.

I MAY now be allowed to conclude with certainty, that I have discovered two different species of Spinæ, which, so far as my reading and study have taught me, never were mentioned, nor hinted at, by any former author or practitioner. Therefore, I think that the distinctions which I have marked, entitle me to consider myself justifiable in denominating the one a Natural Spina; and the other, which is produced by gentle pressure, I shall denominate Spina pressa.

FORMATION  
OF A  
NATURAL SPINA.

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HAVING, in the preceding part of this Book, been pretty full in describing the natural causes and consistencies of Spinæ pedum, I shall now proceed to treat of the formation of these excrescences, which will be found curious and interesting.

THE first appearance of a Natural Spina, is a small speck, the colour of which is somewhat darker than the cuticle, which is often no larger than the point of a pin, sometimes a little larger, but rarely as large as the head of a big pin. This speck, of the smallest size, may remain in the skin for a considerable time, nay, for years, without penetrating much deeper. If it remains in that

situation

situation for many years, it at last concretes, and resembles some extraneous body, such as a coarse piece of sand in the skin. The speck, of a larger size than the former, will penetrate sooner than the time specified above. When the speck is of the largest size, *viz.* as large as the head of a big pin, it will grow much sooner than either of the above: It perhaps may be formed, as a Natural Spina, in the course of a month. The first rudiments of a Natural Spina, is merely a single layer, or scale, which, as it continues to grow, likewise increases, in the number of its layers, downwards. During its continuance in the cuticle, it is attended with very little pain, or inconvenience; but when it penetrates the cutis vera, or true skin, the pain is more pungent. A Natural Spina frequently passes through the true skin.

IF, however, it is once fairly seated in it, it then takes a different direction; *i. e.* instead of going deeper, it ascends, and increases, scale by scale, to a considerable prominence above the surface of the skin. This is a fact pretty

pretty familiar to many, who are pestered with Spinæ, that, on bathing their feet, they often separate, by their fingers, a portion of their Spinæ, which induces them to suppose, that they have removed the cause of their distress. Others, who are less attentive to the management of their Spinæ, may easily perceive, that portions of them will fall or rub off. Therefore, there is no room for disputing the propriety of my doctrine; *viz.* that they penetrate a certain depth, and then ascend.

WHAT is still more surprising, when a Natural Spina is seated between the toes, in the course of four or six months, there uniformly grows another on the opposite toe.

I SHALL now proceed to treat of the formation of a Spina *pressa*\*, which is an excrescence entirely different from a Natural

\* I have here adopted a new name, which I judge very applicable to the excrescence of which I am treating, not only because it is quite different from a Natural Spina, but because it is produced by pressure, which the Latin word signifies.

Spina. The first rudiments of this excrescence may be observed by its brownish colour, which appears to be a very thin membrane, adhering very closely to the cuticle; and, in this state, it may remain a considerable time.

WHEN it begins to increase in thickness, a little pulp is formed, at some particular place downwards. When it is thus formed, it gradually enlarges. That part where it has acquired the thickness, may, by accurate examination, be observed, by its surface being somewhat hollowed, or sunk in. In this way it continues to grow, in some persons, for a considerable time, without much inconvenience: In others, the painful effects of it are felt in three or six months.

AFTER this manner it continues to increase, penetrating the skin. There appears, under the round edge of this Spina pressa, a number of knobs, resembling as many small roots, which adhere closely to the true skin. In such a state, it may remain for some time.

At

At other times, it reaches, nay, sometimes goes deeper, than the true skin. The root then is formed, which gives more pain, and is much larger, than the root of a Natural Spina.

THE root, instead of going deep, takes sometimes a superficial direction, or is altogether circular. When it follows such a direction, it never passes through the true skin; but, however, is productive of very great pain. It has, when removed, a hollow, to which the cuticle is connected; and forms a kind of puckering on the skin, exhibiting, to an attentive operator, a very singular appearance. See Plate II. Fig. 4. &c.

BUT when it has reached the true skin, it then begins to form into one, sometimes into two or three knobs, or roots, which are irregular, as some of them may be seated on the true skin, while the other knobs do not penetrate so deep; hence an interruption to the circulation, owing to the blood-vessels and lymphatics being, in this way, considerably compressed.

HAVING

HAVING given a very slight account of the formation of a Natural Spina and Spina pressa, which if otherwise, I was afraid of imposing on the patience of my readers.

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## SPINA PROJECTA.

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I SHALL now proceed to describe more fully a very troublesome disease, which, in Scotland, is known by the name Vireck: In England, it is called Bunion, or Onion—which terms I judge very improper.

I FREQUENTLY have been consulted by patients who were troubled with Spinæ pedum, and laboured under this complaint, which they call Vireck. On seeing their feet, I, as is usual, began to anoint all the Spinæ observable; but when I attempted this projection, the patients withdrew their feet, exclaiming that there were no Spinæ there, and told me that it was a Vireck.

I THEN examined this more accurately, and, by the assistance of magnifying glasses, observed nothing but Spinæ; therefore I assured my patients, that, in a quarter of an hour,

hour, I would remove the cause of their distress. My name was at that time pretty fully established, and the fame of my dexterity, in this art, so well rivetted in the minds of the public, that they hesitated not to intrust to my care such operation.

THEREFORE, instead of using the terms Vireck, or Bunion, I denominate it *Spina projecta* \*. The first rudiment of a *Spina projecta*, is always seated on the upper part of the first joint of the big toe. In the commencement of the disorder, there is a redness observable on the joint, but it is attended with little or no pain. It will remain in this way for some time, and may disappear, without any inconvenience. It however may return again, perhaps after a year, or even more ; but no regular period for its thus appearing, and disappearing, can be fixed—though, in the course of a month, it may happen to return. If, however, it does not disappear, but remains

\* The reason of this term appears evident, as the part projects very much, occasioned by *Spinæ*.

for a considerable time, there will be seen several small roots, not larger than the points of a pin: When, however, only one root is observable, it is considerably larger. If it returns, the swelling and inflammation are generally more severe than at its first appearance.

I JUDGE it proper here to give an account of the manner in which this projection takes place. There are different causes. 1st, It may be occasioned by short shoes, which considerably contract the toes, and the heel being the resisting point, this part of the toe where it is seated, is bent upwards, which may very readily cause that projection. As it is impossible for us to stretch our toes, owing to this shortness, and the facility of walking being in this way very much prevented, we contract our toes for room, and ease, by which means we put the point of our big toe too much downwards; hence the joint of it projects upwards.

IT very seldom happens to be seated on both feet. It may now be said, that if a short shoe is the cause of the projection, why are not

not both feet subject to it ? The reason of it may be owing to the length of the nail of the big toe, which is sometimes considerably thicker, and longer, than the nail of the other big toe. This nail, by pressing against the shoe, produces this projection, while there is no such thing on the other foot, where the nail is shorter ; and hence not liable to pressure.

2dly, IT may originate from another cause ; *i. e.* a Spina, or Spinæ, may be seated on that joint, which gives very severe pain at times, whereby the patient is prevented from walking straight on his foot, but is obliged to rest the weight on the outer side of it, by which means he contracts his toes, and the point of his big toe is too much on the ground : therefore the projection of the joint is unavoidable ; and it swells and inflames more and more, owing to the pressure. The patient, who labours under this complaint, is commonly ignorant of the cause.

THE only remedy in which people, labouring under such a complaint, have confidence, is

is a cataplasm, from which they derive considerable relief, as it allays the inflammation and swelling. This will afford only a temporary relief to them, as it will again return with the same violent symptoms, or perhaps worse. Indeed they persevere so long in their own remedies, that the toe takes a transverse direction, *i. e.* is turned towards the small toes, and the projection more distended, but never will regain its natural position. I shall assign hereafter the cause why the big toe takes a different direction.

A PATIENT, thus failing in his method of cure, is forced, from necessity, to consult a medical man: And there are many eminent surgeons who will treat such a case as an inflammation; and very properly, as they do not examine it so minutely, as to perceive that such small Spinæ are the causes of that projection. It may happen, that a surgeon cannot perceive these small Spinæ: But sometimes there is only one Spina, which is pretty large in circumference, and more readily discovered. Paring off a portion of it, often gives considerable

considerable relief to the patient. It sometimes goes on to suppuration, which is more salutary to the patient, and is then more judiciously treated by the practitioner.

I SHALL defer the treatment of these, till I come to treat of the Operation of Spinæ in general. I shall now assign the reasons why a toe grows transversely, from such a projection.

A PERSON who labours for a considerable time under such a complaint, is under the necessity of confining himself for some time. But, perhaps, his circumstances do not easily admit of him remaining long in the house: If they did, it would prove injurious to his health, which is not impaired by this complaint. Therefore, that he may not be excluded from the salutary effects of the free air, he first attemps to place his foot on the upper leather of his shoe, his heel being placed as usual, and ties it over his foot, to prevent it from slipping out. This method may prove very useful, when the weather is warm and

dry;

dry ; but when there is either cold or wet weather, it is not admissible, as the complaint may be very much aggravated, by the foot being exposed to the cold or damp air.

IN the next place, he procures a pair of larger shoes, supposing that, by this means, he may put in his foot ; which, when accomplished, is not productive of so much comfort as to allow him to walk with ease, because such a tender part is irritated by the slightest pressure. The patient, however, attempts to walk, which, for a small space, he can ; but in a very short time, it becomes much more painful. Then he cuts a hole in the shoe, to allow that projection to come out, by which means he can walk with considerable ease. He is very proud of this invention, and boasts of having discovered a remedy, which enables him to walk with less pain. On the contrary, this remedy renders his situation much worse, as his foot is not only liable to be injured by the cold, but, what is still worse, he, by this means, forces his toe to grow transversely ; which I shall clearly prove immediately.

LET us now attend to the situation of our foot. The inner side of it is naturally quite straight; the outer side of it, from the smallest toe, increases gradually to the big toe. Our toes are naturally so situated, as to lie close to one another. But if such a projection takes place, accompanied with inflammation and swelling, the big toe, instead of lying close to the next toe, is distended from it.

LET us now attend to the form of our shoes. They are made to contract to a narrow point, which does not answer the exact dimensions of our feet, as the inner side of our feet is straight; and by inflammation and swelling, that big toe is distended much more inwardly from the other toes. A person, thus situated, with difficulty forces his foot into the shoe, to let that projection come out, above the surface of the shoe where he has cut the hole.

LET us now attend to the difficulty which occurs to a patient, in attempting to force such a diseased toe into the point of the shoe.

He must suffer very considerable pain, in thus forcing that toe in an opposite direction from what it had in its diseased state; because, as is said above, it is quite distended from the other toes, now he forces it in a contrary direction, by which means it assumes a transverse form. Having now accomplished his design, he attempts to walk, but, doubtless, with much difficulty. He continues this method for some time, and may, from it, derive considerable ease; and the inflammation and swelling may abate, and the toe become easier, as is the nature of the Spinæ, which are more painful at certain times than at others; which will be found in the Symptoms.

THAT toe has now assumed a direction entirely different from what it had in its diseased state; because it was inflamed and swollen, its integuments and ligaments were quite inflamed and spungy, and, in that state, it has been forced to assume a transverse direction. As it has now come to a more healthy state, it maintains the transverse form, which it had been forced to assume in its diseased state; that

that is, the point of the big toe inclines more closely to the small toes, and the joint projects much more than it did in its healthy state, and never will recover its natural direction.

IN my practice, I always observed, that that joint is double the size of one in a healthy state. I doubt not but that bone may have, by the inflammation and swelling, been affected, so as to enlarge it considerably, as it never does return to its natural size. A person who has had that projection only on one foot, will readily perceive the truth of my doctrine, as he will find, that that joint never will become similar to the same joint of his other foot. If we would adopt the plan of having our shoes made on two different lasts, that is, a last for each foot, it would not only improve the appearance, but would have a salutary tendency in preventing many of the diseases to which our feet are otherwise liable.

SOMETIMES, however, a Spina grows on the same joint, which does not produce a projection at all, neither any swelling nor inflammation;

inflammation ; neither is the pain so acute as is above described, when a Spina is placed in a projection. This Spina, however, is seated on the joint, upon the metatarsal bone, towards the next toe. It is truly singular and astonishing to me, that this Spina is never found deeply seated, nor is the root ever found pointed, though it has more room to descend deeper than a Spina projecta. This Spina is never surrounded with any callosity, which is a deviation from the common course of Spinæ. It is commonly of an uniform thickness, neither penetrating deep, nor arising on the surface. On the root, some protuberances are to be observed, inclining downwards, though none of them are so pointed as to merit the name of roots. By examination I find, that it is a Natural Spina.

*Reasons why SPINÆ have received  
Different Names.*

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I SHALL now proceed to state the reasons why Spinæ pedum have received various names, as Hard, Soft, Black, and Bloody Spinæ. Although these names have continued to distinguish different Spinæ from the earliest ages, yet I shall undertake to prove satisfactorily, that there are only two species of Spinæ pedum, *viz.* Natural Spinæ and Spinæ pressæ.

A HARD Spina pedum is by no means improperly so termed, as, wherever it is seated, it is still harder than our integuments.

WHEN a Spina is situated betwixt the toes, it is termed Soft, owing to the heat and moisture which are common to that part, and which keep the Spina soft, and prevent it from growing to a head, in the manner it would

do

do were it on the surface; therefore this perishable matter is the means of keeping it always soft: It is, in fact, however, a Natural Spina pedum.

A BLACK Spina derives its name from a small clot of blood at the end of its root, which takes place when the Spina is in its full growth, and has entered the true skin, owing to a laceration of some of the small vessels which transmit this blood, which coagulates, and adheres closely to that Spina. A person, when going to bed, pulls off his shoes, which relieves the Spina from pressure, by which means the blood has more room to coagulate, and becomes harder; but, in reality, it is nothing more than a Natural Spina pedum or Spina pressa, but most commonly a Spina pressa.

THE last Spina mentioned above, is termed a Bloody Spina; because when it begins to grow, and to form two or three roots, or perhaps more, these roots do not all grow to the same depth: In general, one of them grows deeper,

deeper, and is thicker, than the other roots. As it thus grows deep, it proves an obstacle to the circulation in the small vessels of that part; and these vessels, instead of creeping under the Spina, make an effort, as it were, to rise over it, and closely adhere to that Spina, having their points directed upwards. This kind of Spina is more painful than others. If a person wishes to assist himself, by paring a little of it, which is commonly done by a penknife or razor, he cannot however cut off many slices, as he will very soon cut the vessels, from which the blood will flow freely: And indeed it is unavoidable for any person, who thus cuts or pares his Spinæ, not to cause a flow of blood, as the vessels are cut by it. Indeed, I myself, with the greatest possible care and dexterity, could not avoid, at times, bringing blood. From this circumstance, therefore, it has been denominated a Bloody Spina: In fact, however, it is most commonly a Spina pressa.

## CONCEALED

## S P I N Æ P E D U M.

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I DEEM it unnecessary to mention every particular spot where Spinæ grow, as I am persuaded, that, instead of encouraging, it would tend to blunt the appetite of the reader, who would neither find himself amused nor instructed by such an enumeration. But, however, if a person is afflicted with a Spina pedum, he will be at no loss to find out where it is seated, unless the cause of his pain arises from a part where he never supposed Spinæ were seated; which I call Concealed Spinæ pedum; and shall treat of them in the sequel.

I SHALL, in the first place, begin with the big toe, taking the others in their order. A person may feel very considerable pain at the inner

inner edge of the nail of the big toe, which, he supposes, originates from the nail penetrating the fleshy part. He, for a considerable time, assists himself, by paring frequently a portion from the nail, where it is most painful; but, unfortunately, without any material relief.

I HAVE been very often called to assist a person labouring under this complaint. The patient immediately informed me, that he had a nail grown into the quick. In the beginning of my practice, I, without much examination, began to cut the side of the nail, slice by slice, as a nail grown into the quick should be managed. Some time after, I was consulted by the same patient, whose complaint was not alleviated by this treatment. When I examined that nail, I was astonished that the patient should complain of pain, as it was not in the least grown into the quick. I, however, began to examine more minutely, and found a Spina seated under the very edge of the nail. I was highly delighted, both on account of my patient, and for my future

M practice,

practice, that I had thus discovered the cause of the pain. I then extracted that Spina, the manner of which will be found under the head of Operation. I visited my patient a month after this operation, who informed me, that he was completely relieved.

I WAS consulted by a patient, to cut a nail, which was supposed to be grown into the quick. When I began my operation, I treated his nail as usual. After finishing my operation, I did not suppose that the nail would be the cause of such pain. In recalling to mind my former case, I began to search immediately under the edge of the nail, but could find no such substance as a Spina. Though I had failed in discovering a Spina, I was however of opinion, that I had freed my patient from his pain. Some time after, I was again consulted by my patient, who informed me, that he was but little better by my last operation; but, however, as his case was truly distressing, and as he knew that I excelled in my art, he, with confidence, delivered the sole management of his case to me, being assured, by the testimonies

testimonies of thousands, that if there was a practitioner in Europe who could assist him, that I was that person. Such genuine confidence, placed in me by this patient, inspired me with anxiety, and proved a powerful stimulus, in exciting me to pay the utmost attention to his case, and to investigate every point, in order to find out the cause of his complaint.

I BEGAN to examine accurately under the edge of the nail, where the pain was seated. I cut the nail in the nicest manner to the very beginning, which I continued to examine with increased attention; and after laying fully open the part, without bringing blood, I was overjoyed to discover a Spina, deeply seated at the very beginning of that nail, which had been the cause of such suffering to my patient. I successfully extracted it, though it was attended with very great difficulty, owing to the deep situation it occupied. In this, however, I succeeded, by removing it from the very beginning. I inquired for my patient several months, nay, years, after this. He was

was always happy to see me ; and informed me with pleasure, that he was no more troubled with his complaint, which proved truly gratifying to me.

AGAIN, a patient, labouring under a pain of the nail of his big toe, having in vain searched for the cause, was informed by his friends, that the nail was grown into the quick ; which, however, he could not observe. He waited upon me, and related his case, wishing me to examine his toe ; which I did with accuracy, without finding any such substance as a Spina. Then I began to cut the nail as before ; but cautiously avoided wounding the true skin, to prevent bleeding, which would have proved a considerable obstacle to me, in discovering properly the cause of his pain. I however succeeded in cutting that nail close to the very beginning, without bringing any blood, but discovered no such thing as a Spina : But I observed a considerable part of the integuments growing over a portion of that nail, in the form of a flap. As I could observe no such thing as a Spina, I supposed that

that this flap, which covered a considerable portion of the nail, was the cause of the pain. Now, as I had cut that nail close to the beginning, by which means that flap would lie on a fleshy part, which is soft, I was of opinion that my patient would find no more pain. I then desired him to press that part with his finger, in order to observe whether or not the pain was relieved. He complied with my directions, but was not capable to determine instantly: But, however, I advised him to return home for a few days, and to attend to the feelings; and that he should let me know the result.

IN a few days he accordingly returned, and informed me, that, at times, he was very sensible of a pungent pain. At my second examination, I was certain that there could be no Spinæ under the nail: so I laid back, and examined that flap; and was no less astonished, than highly delighted with myself, in discovering a Spina grown into the flap, in a very singular manner, deviating from the common course in which Spinæ usually grow,

grow, directed transversely, so that the root was very near to the cuticle in the outer side. There was no callosity whatever around that Spina, as is common to them.

THEREFORE a person, who thus has that flap higher than nature intended, that is, when it rises higher than the nail, need be at no loss to conclude, that the pain is occasioned by a Spina, seated either under, or passing transversely through that flap, or immediately below the edge of the nail. That I may be properly understood, though I mentioned the outer side of the big toe, I mean that side which, both in common and medical language, is termed the inner side of the foot. It frequently happens, that people feel pain at the very point of the big toe, which proves so very distressing to them, that they have recourse to the common method of cutting away part of the nail; nay, sometimes they cut it very short, but without relief.

WHEN I am called in such cases, I commonly find a Concealed Spina at the very edge,

edge, in the fleshy part, at the point of the nail. This Spina is only small, adopting a longitudinal direction ; and is of a dark brownish colour, which can be discerned by an attentive and accurate operator.

As I have been so full in describing the Spinæ that happen on the outer side, I deem it unnecessary to tire my readers with the same narrative on the inner side, as Spinæ occur on it, in the very same manner and order as on the outer. Patients very often complain of a very distressing pain, under the middle of the nail of the big toe. Whenever such distressing cases do occur, the patients commonly have recourse to medical men ; who, wherever I have had the honour of practising, have generally recommended them to me, as they judged, from my unlimited practice in all diseases of the feet, that I surely was the most proper person for effecting a cure, if such was at all practicable by dexterity and success in the healing art.

WHEN I was consulted in such a complaint, I, in examining that toe, observed neither swelling

swelling nor inflammation ; but, however, perceived a brownish yellow spot, under the middle of that nail. When I applied pressure to that part, the patients complained of pain : So that I readily conceived that a Spina pedum, concealed under that nail, might be the cause of that pain ; and what strengthened my idea was, that Spinæ are not generally attended with inflammation and swelling.

THEREFORE, without any hesitation, I began to cut that nail. From my patients, however, I met with considerable opposition, as people commonly are afraid of having any operation upon their nails. Being however recommended by the most distinguished medical men, they yielded to it, and placed their confidence in my superior skill. I myself was a little timid ; but began to cut that nail, which, to my great surprise, I found loose, as far as the Spina was seated : So I gradually proceeded, till I discovered a Spina, which encouraged me to persevere in my operation, until I cut that nail, in a semicircular manner, as far as it was loose. The looseness was in a semicircular

semicircular form, while both corners stood in their natural positions, which enabled me to perceive distinctly the Spina, which now projected above the surface. I immediately then extracted the Spina, which I found to be a natural Spina pedum, surrounded by a callosity, in the same manner as it had been seated upon the joint of the toe.

THERE is a very singular substance, which only grows at the sides of the big toe, upon the very edge of the flap, towards the beginning of the nail. Its substance is very remarkable, when accurately examined. It is very thin, and semi-transparent. Its formation and growth are still more remarkable. When it first begins to grow, it forms a thin edge, scarcely perceptible. During its continuance, it grows downward, and seems to corrode that flap. The substance itself, in the mean-time increasing, grows higher than the natural flap. It first appears at the beginning of the nail, and corrodes down a certain depth, commonly not more than a quarter of an inch, extending to the very end of the nail, and has a

very singular situation. It appears an indurated sheath, clasping firmly the parts under it ; and, at the beginning of the nail, the clasp is deeper, gradually diminishing towards the end. It neither partakes of the nature of a Spina nor callosity ; nor does it grow on any other part of the human body, except on that flap. The inflammation and swelling are commonly, if not always, confined to the clasp itself, seldom or never descending below it ; but at the beginning of the nail, the inflammation and swelling are deeper than at the end. The pain is exceedingly acute ; so much so, that the person who is distressed with this complaint, is forced often to retire from his exercises. There is no particular period of life in which this complaint is more frequent, as both old and young are subject to it. It is vulgarly called a Galled Toe, to which I do not object, as I think they have denominated it so, from the sufferings which they endure : Yet I see the propriety of confining it to the class of Concealed Spinæ, which I judge much more applicable, and more consistent with order.

HAVING

HAVING now described all the Concealed Spinæ on the big toe, I proceed to mention those situated on the first small toe, next to the big toe. A person has been, for a considerable time, perplexed with pain on this toe, without being able to find out the cause, which induced him to consult me. On examination, I found, as is customary, the nail very much shortened, by being pared, which every person, who suffers pain, generally does ; but without relief. As I had repeatedly been consulted on such cases, and frequently met with such in the course of my extensive practice, so I never had to guess, or ponder upon, the nature of the complaint ; but instantly fixed on the part where the pain was felt, and found a very deep-seated Spina, which was very small, and pointed at the root.

THERE, however, never is any callosity to be observed, surrounding this kind of Spinæ. They are always seated under the very corner of the nail, at the very point of the toe. They seldom or never grow towards the beginning of the nail, as they do on the big toe.

Therefore,

Therefore, it certainly will be difficult for a person to discover the Spina under that corner, as it is so very small, having no callosity about it, and being so deeply seated. Likewise, it is not practicable for a person himself to observe it so accurately, since he cannot bring it so completely to his eye as an operator, by whom it may be discovered. I deem it unnecessary to describe the Spina seated at the opposite corner, as I have been so accurate upon the first: It will be found seated in the very same manner, and resembling the other; so, from this description, I hope no practitioner will be at any loss to discover the cause of the patient's distress.

THERE is however another very distressing pain felt on the point of the same toe, exactly in the centre. The cause of this pain is much more difficult to be discovered than in the parts mentioned above. In some, however, it is more easily discovered than in others, especially when some hard substance appears: At other times, it assumes a longitudinal direction, having its roots thin, and sharp-

sharp-pointed, immediately under the nail. If that Spina has assumed a colour somewhat different from the natural colour of the surrounding integuments, it is then with more readiness discovered. A practitioner may even be deceived in this case, as he scarcely will suppose that there is, in that part, a Spina ; and as our integuments are somewhat altered, in their colour, under the nail, so he will be ready to overlook this complaint.

THERE is, however, another very distressing pain on the very same spot as the former. But there is much more difficulty in discovering the cause of it, than of the foregoing. I have been consulted by a patient who laboured under this complaint : And when I examined the toe, I could not discover the cause ; only pared that nail, as is customary, as short as possibly could be done with safety, close to the epidermis. I was contented with what I had done for my patient, as I observed no alteration in the colour of the skin ; so I judged that I had relieved his sufferings. I however erred in my supposition, as I was  
repeatedly

repeatedly consulted about the same toe, for a considerable time after. I was, in the end, fortunate enough to discover a deep-seated, round, and sharp-pointed Spina, which, however, was very small. What rendered it difficult to be observed, was its exceeding smallness, and its similarity in colour to the surrounding integuments, and no callosity about it. Of the two following toes, I judge it unnecessary to be so exact in description, as they are liable to Spinæ on the very same spot as the former; only, on them, there sometimes grow Spinæ at the very point. These Spinæ resemble coarse particles of sand: sometimes very small, at other times larger; but never, however, larger than the head of a small pin. They are often so numerous, as to cover the whole point of the toes; still, however, they never touch each other. They may easily be distinguished by the colour, as they appear more brown than another Spina; yet a person cannot suppose that they partake of the nature of Spinæ, because they only give pain when pressed. Besides, Spinæ pedum are commonly larger than these, and are surrounded

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ed with callosities, by which they are easily distinguished. Though there are not such clear marks for discovering these small Spinae, yet, from what I have said, an attentive practitioner will seldom fail in discovering the cause of the complaint.

THERE is seated a natural Spina pedum at the point of the three middle toes, much more easily discovered than the above, being large, and surrounded with a callosity.

I COME now to speak of the little toe, which is more subject to severe pain than any of the other toes, as a person may endure the most distressing pain for years, before he is able to find out the cause. The reason of this is, that there neither is any swelling nor inflammation on that part where the pain is seated. I have been a thousand times consulted in such cases, but never was at a loss to discover the cause, as it is a general complaint.

I SHALL here state a very remarkable case of a lady, who suffered very great pain for three

three years, at the outer side of the little toe, close to the nail. This lady consulted the most eminent medical men, to whom she related her case. They all examined her toe, but did not discover the cause of the pain, which was very surprising, as there were neither inflammation nor swelling. They were therefore at a loss what to think of this case, as there was no appearance of deformity, either in the toe or nail. They all, so far as I was told, advised the lady to consult me. To which she replied, “ If the pain originated from a Spina, I would have sent for him ere this ; but as this apparently is not the case, what advantage can I expect ? ” She likewise was solicited by her friends and acquaintances to consult me. The lady however was so obstinate, that she refused to listen to their advice, still entertaining the mistaken notion, that there was some other cause than a Spina, which produced that pain.

IN the course of time however, the lady's health was impaired by it ; as she was thereby prevented from her usual exercise during the day,

day, and the severe pain interrupted her rest at night so much, that her sleep never was refreshing. The lady, at last, formed the desperate resolution of having her toe amputated ; and accordingly sent for an eminent surgeon, to perform the operation. When this gentleman came, and examined accurately the toe, he declined the operation ; and again advised her, in the strongest manner, to send for me, as he was certain that if I did not make a complete cure, that I would palliate her suffering.

THE lady, after a severe conflict of three years distress, was prevailed upon to send for me. When I visited this lady, and examined her case, I saw at once that it was nothing but a natural Spina pedum. She asked me, if I could be of any service to her, in relieving her from the distress occasioned by her toe ? To which I answered, that I would relieve her from her pain in the space of a quarter of an hour. This answer was truly gratifying, and delighted the lady beyond measure. She did not dispute that I was right, in thinking that it was a Spina : but begged me to take

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away

away only a part of it at this time, to give her ease for a few days ; then she would send for me again.

I TOLD the lady, that if I did so, that the small piece which would be taken away at this time, might grow again before she sent for me, and consequently my operation would be of no service. I likewise mentioned to the lady, that I did not wish to be directed by my patients how I should do ; but told her, that she might with all safety place her confidence in me. I never could bear to be directed by my patients, as I uniformly observed, the operation was never so easy and complete as when I was allowed to act according to my own judgment. I likewise mentioned, that her case was by no means singular to me, as I had a thousand times extracted Spinæ from the same places ; so, according to my promise, I relieved this lady from her sufferings in the space of a quarter of an hour. This operation was by no means difficult for me ; but to an unexperienced practitioner, it would have been impracticable to extract it completely.

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THE situation and growth of such a Concealed Spina, are entirely different from every other Spina on the feet. The first rudiment begins at the very corner of the outside of the nail, and continues its growth, between the skin and the muscle, to a considerable depth. Indeed, so deep does it often grow, that it passes the first, and comes to the second joint. It is by far the longest and thickest Spina (which will be seen in Plate I. Fig. IV. Let. *b*) that grows on our feet: The reason of which is obvious, as all our other Spinæ grow perpendicularly down, till they meet with resistance, which prevents them from descending deeper; but this Spina, taking its growth betwixt the integuments and the muscle, meets with no such resistance, and consequently grows to a very considerable length and thickness. It will be no difficult matter to conceive the reason, why a person, who is afflicted with this Concealed Spina, should be more distressed by it, than by any other.

IF we consider the manner of walking, and the situation of the little toe, it will not be surprising that the pain is so pungent, as, when walking,

walking, our little toe always touches the ground ; now, when such a substance is situated between the integuments and the muscle, the pain must necessarily be extremely severe, as it produces the very same effect that any extraneous body would do. What is very remarkable, I never, in my practice, found this Spina go on to suppuration, as sometimes happens to other Spinae.

THERE is another very singular complaint which likewise attacks the little toe, which is entirely different from the former, though it is nothing more than a Concealed Spina. Its formation is at the regulator of the nails\*, which, from a short continuance, considerably inflames and swells the toe. This Spina never grows deep ; and the pain is by no means so distressing as in the former. A person, thus afflicted, cannot suppose that the pain proceeds from a Concealed Spina, on that part ; because its situation is quite different from every other Spina. Whenever it has seated itself, and inflammation and swelling have taken place, it takes its course around the

\* See Treatise on the Nails.

epidermis,

epidermis, over the nail, and extends a little both above and below the epidermis; and, at the same time, adheres very close to the nail, and extends no farther than the inner corner at the beginning of the nail. It is a very easy matter to extract this Spina; the mode of which will be found under the head of Operations.

AGAIN, on the little toe, a very singular Concealed Spina is to be met with, which is seated at the inner side, at the very corner of the beginning of the nail. It grows betwixt the integuments and the nail, but descends no farther than the beginning of the nail. The pain, however, is still less than the former. Though it grows thicker and deeper, yet there is neither inflammation nor swelling, nor is there any pungent pain, as in other Spinae. Such Spina is, however, but very rare. As for the inner corner of the point of the nail, I never have found a Spina situated there, such as is to be met with on the other toes. Thus I have fully described all the Concealed Spinae with accuracy, and in an easy and intelligible manner, which will enable both patients and practitioners to discover readily the cause of their complaint.

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## SPINA FIBROSA.

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I SHALL now proceed to give an account of a Spina fibrofa \*, which complaint is extremely rare. When I was in the habit of studying the works of the ancient physicians, I observed a peculiar complaint on the feet, which they termed Clavus pedum: But as they treat it as a complaint on the feet, without assigning any reason for it, so they leave me to judge for myself. All that I can learn from these authors is, that a Spina fibrofa cannot be extracted. They neither point out the

\* The propriety of the term will appear evident, from the number of fibres involved in this excrecence.

nature, substance, nor cause, of such an excrecence ; nor do they mention any plan of cure.

I SHALL therefore endeavour to throw as much light on this dark and intricate subject, as an extensive practice, and attentive observation, have enabled me. I was a considerable time in practice before I met with this complaint. It surprised me much, that I had been in practice for several years, without finding such a substance ; and was at a loss to conceive what these authors meant by a Clavus pedum.

I was however consulted by a lady, who complained of a very painful Spina, on her little toe. She shewed me her foot, and asked me, if I thought it was a Spina ? When I saw her foot, I observed that there was a hard excrecence upon her toe, which was swelled and inflamed. I, without any consideration, answered, that it was a Spina ; and began to operate accordingly. In making an incision, the patient complained severely of pain ; which not a little surprised me, as I commonly gave little

little or no pain in extracting Spinæ. I however persevered in my operation till blood appeared, though the patient suffered very much pain. This was truly astonishing to me, and I was at a loss what to think. It however occurred to me, that the ancients had mentioned a Clavus, which could not be extracted; so I thought that this might, perhaps, be such a substance. Still, however, I made another attempt, with care and dexterity, to extract part of this excrecence. I succeeded in dissecting a part of that callosity, round its edges; which the patient bore, but not without pain.

BUT in advancing towards the centre, the lady was neither able to suffer the pain, nor was I able to proceed farther, as the blood prevented me. Therefore I had no doubt that this was a Spina fibroſa: But to convince myself properly, I desisted from operating till the blood ceased, in order to dissect a part of that substance, which I wished to investigate narrowly, that I might be able to mark the distinction betwixt that substance and a Spina pedum.

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I THEN proceeded again, and continued my dissection; but not without considerable pain to the patient. I observed, in that spungy substance, plexuses of fibres, growing directly up in it; and, while dissecting, the patient complained of very severe pain, which is not surprising, as I was under the necessity of cutting many of these fibres, by which means blood, and a limpid liquid, oozed out. The blood, however, did not flow with violence, as, in desisting a few minutes from my operation, it ceased. The nearer I dissected to the centre, the number of these fibres were increased, which I could distinguish clearly with the naked eye.

I FINISHED this part of my operation, and dressed the toe with the common plaster which I apply to a Spina pedum; and, at the same time, desired my patient not to walk till my next visit.

THE substance which I dissected from the edges, I carefully preserved, though it was very little; because, towards the centre, there

was nothing but a cluster of fibres, from which I could not with safety dissect any thing. I visited my patient two days after this operation, when I asked her how she felt her toe? to which she answered, that she could not tell, as she had followed my direction; and therefore could not be sensible whether or not she was better, as she had not attempted to walk. When I looked at her toe, I found it more inflamed and swelled than it was before, and the spungy substance was whiter and thicker than when I first saw it.

I AGAIN attempted to dissect; but as the pain was so great, I adopted another method, by paring off a little of that substance, slice by slice, without giving pain. This last method I found easier for her, and equally answerable to my views. I found that my first application had been of little or no service: I therefore provided myself with a different plaster, which I applied to that *Spina fibrofa*; and now ordered my patient to keep her feet warm, and not to restrain herself from walking. My views, in giving these directions, were,

were, that she might be able to give me a more satisfactory answer, as she was not able to feel any change whatever from my former treatment; neither could I observe any material alteration, from being restrained from walking, agreeably to my order.

I AGAIN visited my patient, and asked her how she was? She answered, "I am " a great deal worse, as the pain was so very " severe in bed, that it prevented me from " sleeping." On inspecting the toe, I found, that not only the toe, but the whole foot, were very much swelled and inflamed, and the Spina fibrofa very much thickened, so that I could not observe that I had pared off any thing; so much, in two days, had it increased in thickness. I then adopted the same method, and was able to pare off a larger portion of that spungy substance, around the Spina fibrofa, than I did before; but never was able to operate, without bringing blood.

I THEN was sensible that these fibres were the cause of the severe pain of a Spina fibrofa.

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Of this I have the most certain proof, as, at my third operation, I was able to pare off not only a larger portion of the spungy substance, but with much less pain to my patient, than at my first and second operations: Therefore, I am persuaded that I had cut several of these fibres, at my first and second operations; and that they had withdrawn themselves from that spungy substance, which rendered the operation both easier to me, and less painful to my patient.

AT this visit, therefore, I thought that the most effectual remedy for this substance, would be some powerful corrosive medicine, which might either destroy, or withdraw, these fibres from this substance. I however dressed my patient with this medicine; and directed her to wear a cotton-stocking, and restricted her from going abroad, but allowed her to walk about the house.

My reasons for these directions were, that as I had before directed her to use warm regimen, and take exercise, by which the case was evidently

évidently worse ; so I judged that cool regimen, and very moderate exercise, might be attended with advantage, especially as the inflammation and swelling were increased by the heat.

I THEN revisited my patient, and inquired after the state of her toe. She informed me, that the pain was not so severe as formerly, but it was still far from being well. I then asked her, whether she felt the pain more severe in bed, or when she was up ? or at what time, or in what position, she found most ease ? She answered me, that the pain was more severe, and her foot more swelled, in the evening, than in the morning.

WHEN I examined her toe, I observed the Spina fibrofa very much thickened, which I treated after my former method ; and was able to pare off a still larger portion of that spungy substance, and to proceed much nearer the centre, by which means I was convinced that the number of these fibres were considerably diminished.

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I THEN applied the same medicine; and desired my patient to abstain from walking much. My reason for this was, that as she informed me, that she felt herself easier in the morning than in the evening, so I judged that *rest* might prove beneficial in this obstinate case.

AT my next visit, she informed me, that she was now much easier than ever she had been, since she had been troubled with this complaint. This yielded me very much comfort. But, on examining her toe, I found it equally as large as before: So I renewed my former operation, and pared off still a larger portion; and the fibres were apparently diminished, and the swelling less. I therefore applied the same medicine; and directed her to walk as little as possible, and to keep her foot moderately warm: to which she paid attention. I continued the same medicine; and visited my patient every second day, for some weeks, and uniformly found the Spina fibrofa as large as if I had not pared any from it. At times, however,

ever, she informed me, that she was a little easier; at other times, she felt herself worse. This variation was owing to the exercise which she took; for when she walked little, her foot was easier than when she indulged more in that exercise.

I HAD now visited my patient every second day, for some weeks; and, at every visit, pared off as much as I did at my second or third visits, without observing any evident diminution of the *Spina fibrofa*, and without producing any salutary effects towards a cure.

I THEN judged that my medicine was perhaps too mild for such an obstinate case; and, therefore, I provided myself with a more powerful medicine, which I thought proper to apply, as I thought it would tend more to effectuate a cure. Two days after this application, I visited my patient, and asked her how she felt her foot? She told me, that it was much worse. Upon examination, I found her toe and foot very much swelled, and the *Spina fibrofa* in the same state as formerly.

merly. As I was not certain whether this medicine was serviceable or not, for the first application, so I judged it proper to apply it a second time.

I THEN visited my patient at the usual time, when I found her complaining of still more severe pain; and the inflammation and swelling were increased. I was now under the necessity of applying a cataplasm, to reduce the swelling and inflammation. I think it unnecessary to weary the reader, with a detail of all the visits I made, and medicines that were applied. In short, I tried all possible means, and every species of medicine which I thought could be applied with safety, for a considerable time, but without any good effect in promoting a cure. I at last, however, happened to apply a medicine, with which a complete cure was performed in the space of eight days, which I shall mention under the head of Cures.

I HAD now attended this lady regularly every second day, for three months, during which time she was in very great distress; and,

and, indeed, it gave me much uneasiness, to be so tedious: But as I had no person to instruct me in that art, nor any author, either ancient or modern, who could afford me any assistance, I therefore felt myself under the disagreeable necessity of persevering, and of applying various medicines, in order to discover a cure for this truly painful complaint, which might tend to the general comfort of mankind.

I TRUST the reader will neither think my time nor labour ill spent, when he is assured that I gained the object of my wishes.

I FEEL myself at a loss to conceive how people assisted themselves in this complaint, as, though it is mentioned by authors, yet no plan of cure has been proposed. Indeed, all the ancient authors mention a *Clavus pedum*, and *Clavus oculi*; but no directions, with regard either to a palliative or radical cure, have been proposed.

BUT as we have had repeated instances of deaths, from people improperly cutting

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their Spinae pedum, so I have reason to believe, that, instead of a Spina pedum, it most undoubtedly has been a Spina fibrofa. To put this beyond doubt, I mention the celebrated poet and orator, Silius Italicus, whose death was occasioned by an incurable Spina fibrofa, as mentioned in Heister's Epistles. See Heister, in the Chronological List, at the end of the book. From the nature and situation of a Spina fibrofa, I am of opinion that it cannot be extracted, owing to the numerous fibres, blood-vessels lymphatics, and nerves, which are intermixed in that painful excrescence.

FORTUNATELY for the human race, it is a very rare complaint, as I have met with four or five thousand Spinae pedum, for one Spina fibrofa.

THE formation, or origin, of a Spina fibrofa, I shall attempt to define. I inquired at all my patients, who were troubled with this complaint, if their parents were subject to it? They, however, could not satisfy me on this point.

point. From a most extensive practice in all diseases of the feet, but more especially, in treating the excrescences which form the subject of this Book, and from very accurate attention to each of them, which I thought proper to investigate with minuteness, I certainly may be considered as entitled to throw considerable light on this interesting subject ; and particularly, on the *Spina fibroſa*, which, from the first dawn of science to the present time, has eluded the notice of the most ingenious and celebrated men.

I CAN assign no reaſon why the term *Clavus* has been given to this disease. But though it has been so termed from the most ancient medical author, and continued unchanged from the earliest ages to the present time, and though it is quite familiar to every medical man, yet I think it improperly termed ; and have therefore very properly denominated it, *Spina fibroſa*. If they had any knowledge of this complaint, it must have been very shallow, as the term they use, demonstrates. From its obstinacy however, they undoubtedly have frequently

frequently attempted either to cut or extract that excrescence, but have found it impracticable; therefore they have termed it, Clavus, from the similarity which it appeared to have to a nail, fixed, or rather rusted, into a beam, which is very difficult to be taken out.

I HOWEVER, in my practice, was able to pare off a considerable portion from that excrescence; though I by no means say, that I could extract it altogether, owing to the number of fibres involved in it. Not only are there fibres, as I said above; but blood-veffsels, lymphatics, and small nerves, are likewise involved in that excrescence, which I shall shew from some very remarkable cases, which occurred in my busines.

I WAS consulted by a lady, who complained of very severe pain on her little toe. I had attended this lady several years, for extracting Spinæ pedum. When I examined her foot, I observed that it was more inflamed than usual, which astonished me. However, I began to operate after my usual manner, when

when I found it impracticable, by all my art and dexterity, to extract it. Whenever I made an incision, the blood appeared. I therefore desisted a moment from operating, till the blood ceased.

THE lady asked me, what was the matter ? I answered, " Madam, to my great astonishment, this excrescence, which I have extracted, for ten or twelve years, as a *Spina pressa*, is, I suppose, become quite a different substance." I then proceeded to my operation, and found it a real *Spina fibrosa*, which I treated accordingly ; and desired the lady not to meddle with it too soon.

I THEN visited her on the third day after the operation, which surprised her ; whom I had never before visited, unless called for. My reason for coming upon her unexpectedly, was, that I did not wish to inform her of the case, lest anxiety should have deprived her of rest, or lest she should have suspected that I had committed an error. The lady, no doubt, had cause to suspect that there was something un-

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common with her foot ; and accordingly, she inquired. I told her, that, at my first visit, I had observed that it was quite a foreign substance, which, for the sake of her ladyship's health, I thought proper then to conceal, as I was apprehensive that anxiety might have injured her rest : But I desired her to be of good courage, as I would perform a cure ; but it was of such a nature, as to require my attendance every second day, for a short time.

THE lady relied with confidence on me. So, upon examining her foot, I found it more inflamed and swelled than I wished, which was owing to the lady's walking, from which I did not venture, at my first visit, to restrain her. I then asked her, how she felt her foot ? She said, that she felt very considerable pain, which not a little astonished her, as she never before had felt any pain after my operation. I however examined her toe narrowly, and found that it was a real *Spina fibrofa* ; and likewise observed it much larger than it was two days before. I therefore pared off a considerable portion, and applied my medicine ;

cine; which I found the most effectual for the cure of a Spina fibrosa, as I did not think proper to make any farther experiments: So I continued to dress the lady's toe every third day; and effected a complete cure in the space of fourteen days. I have repeatedly visited the lady since that period; and am happy to state, that there is not the slightest symptom of its recurring.

I SHALL mention another remarkable case, which came under my care. A gentleman was afflicted with some painful excrecence on the posterior part of his heel. When he looked at his heel, he was astonished that such a trifling excrecence should give such pain. He laboured, for some time, under very great pain and uneasiness, which obliged him to walk with the heel of his shoe down: But at length the pain became so severe, and the foot inflamed and swelled so much, that he was under the necessity of calling his surgeon.

THE surgeon, from the nature of the case, supposed that it was occasioned by some extraneous

traneous body being lodged, or taken in. He inquired, in what manner the case originated. The patient answered, that he knew of no particular cause, as he never had felt any pain previous to the first attack ; and was sure that no extraneous body could be taken in, or he would certainly have felt it.

THE surgeon then attempted to lay it open, as the appearance of it indicated such an operation. When, by the scalpel, he made an incision, the patient complained of great pain, and blood instantly issued. The surgeon attended him for two months, without any good effect. Several of the patient's friends visited him in his distress, and saw his heel ; and perceived a hard excrescence. They therefore supposed it was a Spina pedum. The patient, however, distrusted their observations ; and asked, how it was possible for a Spina to grow on the heel ? He related their opinion to his surgeon, who again examined it minutely ; but was still uncertain of the case, as it was quite new to him. He then advised his patient, by all means to send for me ; which he accordingly did.

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WHEN I visited the gentleman, I inquired how long it was since that case had happened? He answered, that for eight days he was confined at first; then he sent for his surgeon, who had attended him two months, without any benefit to his case. He then said, "If, " according to your judgment, this is a Spina; " I beg you will proceed; and on you I rely " for a cure." I then inquired, if he could blame any thing for causing that pain at first? To which he answered in the negative. I then began to examine it strictly, and was myself of opinion, that it was a Spina pedum. As usual, I began my operation for a Spina. But, in making an incision, I observed directly, that it was a Spina fibrofa; therefore I desired my patient to abstain from walking, and to keep his foot moderately warm. As this is so very rare an occurrence, I never take along with me the medicine, with which I perform a cure.

I THEREFORE went home, and brought it; which I applied to that Spina fibrofa: And in two days, I visited my patient, who told me,

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that he was considerably relieved. I continued to visit him, and to dress his heel every second day ; and performed a complete cure in the space of three weeks. I would have effected a cure sooner, had I been called at first, as the case was rendered much more obstinate, by the various medicines, &c. which were applied.

A YOUNG lady, of a genteel family, in which I had been employed, for several years, to extract *Spinæ pedum*, was troubled with a very hard excrescence, round the last joint of the first finger, covering the whole joint, from one side of the nail to the other ; which, for a considerable time, prevented the proper motion of that finger, and hindered her from such amusements as are necessary for ladies.

HER parents applied several remedies without effect. When I was again consulted by the family, the mother shewed me her daughter's finger ; and asked me, if I could be of any service to her ? I asked, if she had been subject to,

to, or had at present, any warts? To which she answered in the negative. I then accurately examined her finger; and, to be sensible of the case, I took my instrument, and dissected a small portion from the excretion. I was, from this, suspicious that it was a Spina fibrosa. But as authors had mentioned a Clavus pedum and Clavus oculi, but never a Clavus digiti, I was therefore a little diffident, and treated it as it had been a wart; and applied such remedies as are appropriate for them, without any benefit. At last, however, I applied my medicine, which had never, as yet, failed in curing a Spina fibrosa; by which the lady's finger was completely cured in fourteen days.

A YOUNG lady, troubled with warts over her hands and fingers, was tormented, at the same time, with a troublesome excretion, similar to the above case. She had recourse to all the remedies she could hear of, which she incessantly applied to this excretion, paying no attention to the warts, as they did not give any pain; but she could not obtain

obtain any relief. Though I had been employed in that family for several years, it never occurred to them, that I had any practice in such excrescences.

I, HOWEVER, was employed by a noble lady, who mentioned the case of a particular friend of hers, a young lady, who was truly distressed, with a finger which had an excrescence on it. She asked me, if I thought I could be of any service to her? I answered, that if I saw the patient, I might perhaps be serviceable to her. The lady gave me her friend's address; and wished me to call on her, to inspect her finger. I observed to her, that I was lately in the house, but heard nothing of the case. I however made an apology to the lady; and told her, that I never went to visit any person from recommendation, unless I was sent for.

NEXT day, I had a message from the young lady: Then I went; and when I saw her hands and fingers so much covered with warts, I was careless about taking her case in hand,

as I did not know but that peculiar excrescence was somewhat of the substance of these warts, which, in the beginning of my practice, I likewise professed to cure. I, however, gave the lady my medicine, to apply to her finger, which I desired her to change at the end of every third day. From the uncertainty of its being of the nature of a *Spina fibrofa*, and from the numerous warts, I did not much concern myself about the issue; and from much business at the time, this case escaped my memory.

A CONSIDERABLE time thereafter, on passing her lodgings, I recollect~~ed~~, that I, some time ago, had left with the lady some medicine for her finger: So I called for the lady, who, on seeing me, was very happy to announce the complete cure of her finger; and shewed me her hands, to see if I could distinguish the particular finger, which I could not.

FROM these cases, it is evident, that the fingers are liable to be attacked with these obstinate excrescences, which have altogether been overlooked

overlooked by authors. I therefore have a just title to claim this discovery, which may not only be useful to those labouring under such grievous complaints, but will guide succeeding practitioners, in forming a proper diagnostic, and in applying an effectual cure.

WHETHER this disease is more common at one period of life than at another, I do not presume to establish; only I never, in my practice, met with it on the fingers, in patients below seven years, nor in these above twenty. Whether or not this holds universally, further experience and observation must verify.

I JUDGE it unnecessary to mention more cases on the fingers, though I have had several under my care, all of which yielded to my medicine. These mentioned, will suffice for a specimen; as, I apprehend, I either impose upon the patience of the reader, by enumerating too many, or insult his understanding, by offering many proofs, of a disease, which, in my practice, is pretty frequent

A COUNTRY lady, afflicted with a Spina fibrofa on the sole of her foot, was ignorant of the cause which produced the severe pain, and prevented her from walking. She, however, had recourse to the common application, namely, a poultice; which she continued for some time without advantage, as the pain still continued.

SHE then sent for her surgeon, who, as is usual, applied lenient ointments, without any good effect. He then applied corrosive plasters, during a period of eight months, without any service to his patient's foot.

THE lady therefore resolved to come to town, where she expected to obtain a cure. She accordingly came, and sent for a surgeon of eminence. This gentleman attended her for a short time; but soon observed, that his art was insufficient to overcome her complaint. When he examined it minutely, he supposed that it was a Spina pedum, from the spungy and callous appearance which it exhibited.

HE then advised her by all means to send for me; with which the lady instantly complied. I accordingly attended; and when I saw her foot, was certain that it was a Spina fibrofa.

THE lady asked me, if I would undertake to perform a cure? To which I answered in the affirmative; as, from the success of my medicine in similar cases, I could with certainty promise it. The lady then cheerfully intrusted her obstinate case to my management. I did not think proper to use my instruments in this case, to remove part of the callosity, which renders the medicine more active.

MY reason was, that the lady had for so long a period been tortured with repeated operations, and various corrosives, which had very much injured both the case, and the lady's health; and her foot was very much swelled, which prevented her from using it, even in the slightest manner—so severe was it, that she was obliged to keep her leg lying on a pillow,

pillow, placed upon a chair. As this posture became exceeding troublesome, the lady attempted, at times, to alter the position of her leg, by shifting it from the pillow, and inclining it towards the ground ; but as she felt the pain increase in this way, she was obliged to replace it immediately upon the chair.

I ASKED my patient, if she had observed any callosity on the sole of her foot, previous to the attack of the *Spina fibrofa* ? She told me, that she had observed a substance there, somewhat hard ; but it never gave her any pain, till about nine months past. I treated her case after my usual manner ; and, at my second visit, found her capable of placing her foot upon the ground. In short, I cured this lady completely in the space of fourteen days ; and she has had no return of her *Spina fibrofa*.

I SHALL mention another case, still more remarkable than any of the former. A young lady, whom I had attended several years, for extracting *Spinæ pedum*, became afflicted with

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a more severe pain on her little toe, than she had ever experienced from her Spinae. The lady was at that time in the country, where she tried various remedies to no purpose. She was therefore obliged to return to town ; and immediately consulted me, concerning the uncommon pain which she felt. When I examined her toe, I was of opinion, that it was a deep-seated Spina pedum. As the other disease but rarely occurs, I do not immediately form a diagnosis concerning it, even though they inform me, that the pain is very severe ; as, from the first view, I cannot distinguish that it is a Spina fibrofa. When I began my operation, I instantly observed that it was such. I then desisted a little ; and informed my patient, that it was a substance entirely different from a Spina pedum.

THE lady was somewhat alarmed at this information ; which I endeavoured to dissipate, by assuring her, that I had had several such cases under my care, all of which I had successfully cured.

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THE lady asked me, how long time I would take to cure her toe? I answered, that in the space of fourteen days, I would perform a cure. I then began my operation, and extracted as much from the Spina fibrofa as could be done with safety. During the operation, she complained of pain; and remarked, that I had frequently operated upon that toe, but never had given such severe pain as she at present felt.

I OBSERVED to the lady, that as the complaint was quite different from what it was formerly, so it was impossible to operate at all, without giving some pain. I therefore desired the lady to make herself easy, as I would extract a portion from it, without any danger; which I did; and dressed her toe after the usual manner; and informed her, that I would be under the necessity of dressing it every second day.

I ATTENDED the lady regularly, at the stated periods, for fourteen days; and, to my great astonishment, found it, instead of being any

any better, considerably worse. So much was I disappointed, that I felt myself at a loss what to think or do. I had never before failed in performing a complete cure by my medicine; and to try other medicines, I knew was absolutely vain.

I, THEREFORE, resolved to take away more of the spungy substance from that excrecence, even though it should give more pain; by which means, I thought my medicine might operate more powerfully on the Spina fibrofa.

So I attended other fourteen days; and every second day, pared off a portion from this substance; but observed it in the very same state as at my first visit.

I DIRECTED her to use the antiphlogistic regimen; and to guard against exciting causes, as walking, and such exercises. I then visited my patient every third day, for a month longer; but without any appearance of a cure; I therefore thought, that the antiphlogistic regimen was of no service.

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I QUESTIONED the lady at every visit, if she followed my directions? She answered in the affirmative. From this, I was of opinion, that she must have some disease which rendered her case so obstinate, which I mentioned to my patient; and told her, that this was the first instance in which I had failed to perform a complete cure.

THE lady, however, not yet discouraged, insisted that I would persevere till she was cured; and that she would compensate me, for my time and attention, with pleasure. I, therefore, was prevailed upon by the lady to persevere, though I had resolved it should not be long.

I CONTINUED to visit her three or four times longer, without observing any alteration: I therefore inquired at her mother, what could be the cause that I could not get the better of her daughter's case? but she could not say. I then asked her, how she lived? if she walked much? and other similar questions.

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THE lady informed me, that her daughter had acquainted her, that she was restrained by me from walking; but that she, for the sake of her health, indulged as much in that exercise as usual, though she complained of very great pain.

THIS I mentioned to my patient; and informed both herself and friends, that if this exercise was not desisted from, I, most undoubtedly, would not revisit her.

BOTH my patient, and her friends, promised to guard against exercise, since I was of opinion, that the cure of her *Spina fibrofa* was prevented by it.

AT my next visit, the appearance of her toe was more favourable; and it became, from time to time, much better. In short, after she had restrained herself from walking, I cured her toe in the space of ten days. I was perfectly convinced, that walking was injurious to a *Spina fibrofa*: But this case, upon which I attended three months, afforded me the most evident

evident certainty of its baneful effects, in preventing a cure; for if the lady had followed my directions, I would have performed it within the time specified.

WHEN I was just finishing this Treatise, a case, much more singular than any of the former, occurred to me, which I deem worthy of notice. A Medical Gentleman, in Edinburgh, sent a card to me, requesting me to call at him; to which I accordingly attended.

THE gentleman informed me, that he had a very painful Spina pedum. Indeed, he has had several Spinæ, which I, some years ago, extracted; but the pain of this, was infinitely more severe than any of the former. When he shewed me his foot, I observed, upon the last joint of the third smaller toe, a singular Spina, projecting uncommonly high; and what was still more strange to me, I scarcely perceived any inflammation round that part.

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WHEN I began to handle it, the gentleman said, that he was afraid that he could not allow me to extract it, because touching it, produced such excruciating pain that it almost made him sick. I inquired at him, how long this Spina had continued ? He informed me, that, for a long time, there had been some excrescence there, but it had never given him pain till about a fortnight ago ; and that he very often had attempted to cut it, but the pain was intolerable : Still he persevered in his operation ; but was always prevented, by bringing blood. From accurate inspection, and from the information given by the gentleman, I was convinced, that it was nothing else than a Spina fibrosa. So I, accordingly, proceeded with my operation, and took off from this Spina fibrosa, more of the excrescence surrounding it, than I ever had done in a similar case, without bringing any blood. I do not say, that I have done all this without pain ; but the pain was much less than the gentleman expected. After having removed as much of that excrescence as I deemed proper, I ventured to pare a little from the centre. When I slightly began to cut a little,

a little, he complained of very great pain; and blood likewise appeared: So I then desisted from operating, and applied my medicine. He then asked me, if I thought I could cure him, or give him ease? I assured him, that if I failed in curing him, that he would not find another in Britain who could do it. This, perhaps, might be deemed, by the gentleman, somewhat presumptive in me, as I was pretty bold in my promises. As he was a medical practitioner, I did not prescribe to him any particular regimen; but strictly enjoined him not to walk. I then desired him not to meddle with it, as, in two days after, I should visit him. At my second visit, when I saw the *Spina fibrofa*, I found it of a much more favourable appearance than at first; and the gentleman informed me, that he found it a little easier. I then dressed it, according to my custom; and acquainted him, that I should attend him every second day. At my third visit, however, I found his toe much worse than before, and the gentleman complaining of more pain. I was at a loss what to think, as it was worse than at my last visit.

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I then asked, if he could assign any reason for this unfavourable change? or if he had walked too much? He answered me in the negative; and that he only took an airing in his carriage. I then asked him, what kind of regimen he was using? if he had used fish, or ardent spirits? He said, that he was exceedingly sparing in the use of spirits; but never thought he had well dined, unless he had fish. I therefore forbade him the use of fish, and recommended the antiphlogistic regimen; with which he readily complied. At my next visit, he informed me, that his toe was a great deal easier; and, indeed, I found a remarkable change upon it to the better. In short, I cured him in the space of fourteen days. The gentleman, understanding that I was about to publish this Treatise, desired me, for the good of the public, to describe his case; and, indeed, was generous enough to allow me to mention his name: *viz.* Mr. John Bennet, Surgeon in Edinburgh, Fellow of the Royal College of Surgeons, and one of the Surgeons to the Royal Infirmary, Edinburgh.

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HAVING mentioned several remarkable cases, I shall, as was hinted above, proceed to offer some observations, which may tend to prove how a Spina fibrofa is produced. From the above case (and many more might be mentioned, were it necessary), it will be understood, that I uniformly found, in my practice, that a Spina fibrofa, had formerly been a Spina pressa. Such patients as I was consulted by, for a Spina fibrofa, whom I had not attended before, I always interrogated them, if they had been afflicted with a Spina pedum, or any such substance? or if they could blame any thing for bringing on this painful complaint? or if the complaint originated at once?

THEY informed me, that they had been afflicted with a hard excrescence, but never had felt much pain from it till of late, when the pain became so severe, that their sufferings were very great; so they were advised to consult me, to obtain relief.

FROM what I have observed in my own practice, and from inquiring carefully at my patients,

patients, who were afflicted with this severe complaint, whom formerly I had not attended, I uniformly found, from the most convincing evidence, that these Spinæ fibrosæ had originated from Spinæ pressæ ; which, however, might have remained such for years, before they assumed this nature. How this happens, I shall describe in as accurate a manner as my judgment, and attentive observation, may direct.

A SPINA pressa, then, may remain for several years ; during which, a person will feel some inconvenience, but no considerable pain. When, however, one, or more protuberances, begin to sprout from that callosity, and descend, and these, by the pressure of the shoe, are forced upon the true skin, the pain is somewhat more severe : So this becomes an obstruction to the vessels, which are, by these protuberances, prevented from following their natural course.

FOR the fibres adhering in this excrescence, I shall assign two reasons. First, When the heat  
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of the body is above its natural standard, perspiration is more increased, which continues to render that substance more spungy, and increases the *impetus* of the blood, by which means the fibres have a more easy access into it; and when the heat returns to its natural standard, that excrecence becomes harder, and these fibres are so involved, that they cannot withdraw themselves from it.

SECONDLY, Most people are in the practice of bathing their feet, either for cleanliness, or for the purpose of relieving the pain of their Spinæ pedum—from which they only pare off the surface, by which means the remaining part becomes more soft and spungy. Perhaps they are mistaken in this, as when the water is too warm, and the feet allowed to remain therein too long, it has a considerable effect, both in increasing perspiration, and in softening that excrecence, into which the fibres easily insinuate themselves.

SOME time after removing their feet, that substance becomes harder, and compresses these fibres

fibres much closer, than formerly, so that they cannot withdraw themselves; and instead of passing through that protuberance, they creep upon it, and point towards the centre of that excrecence. This was verified in every case that came under my management.

I ENDEAVOURED to satisfy myself on this point; *viz.* that this substance becomes much harder than it was in its natural standard. When I was employed by patients, to extract Spinæ pedum, I seldom could prevail upon them to try any application whatever, as their confidence in me was so great, that they said, the easiest, safest, and least troublesome remedy, was my operation.

BUT there is a well-known plant, which has long been considered a cure for Spinæ pedum. This plant is termed House-leek, or more vulgarly called Fow, which commonly grows on walls, or the roofs of houses. The leaves of this plant are very juicy, and softens such an excrecence very much. I could easily persuade my patients to make use of this, as it

is universally known as a cure for Spinæ pendum. The character of this plant is however overrated, as it merely has the power of increasing the size of the callosity, and of rendering it more spungy and soft, by which means a person may find relief in one night's application; but it again becomes as painful as ever, and is increased considerably in size, and much harder than it was in its natural standard.

THEREFORE I may conclude, with some certainty, from what is mentioned above, that these changes, from the above circumstances, are the causes of a Spina fibrofa; which I have attempted to prove in the most satisfactory manner.

FROM the above short, but accurate description of Spinæ fibrofæ, no practitioner will be at a loss to form a proper prognosis. Their situation is various. But, in general, every Spina fibrofa, occurring on the feet, has formerly been a Spina preffa; at least, I have uniformly found this in my practice.

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IT may now be asked, How does it happen that a Spina fibrosa is produced on the fingers?

TO answer these questions, I shall offer a few slight observations, which to me appear the most eligible.

A SPINA fibrosa is seated at the last joint of the fore and middle fingers, commonly covering the whole joint. It is never to be met with in girls, below seven. From this I would remark, that girls, when older, are engaged in branches of education which particularly demand the exertion of these fingers. In sewing, the needle pricks the fore finger, and irritates it; and very much disfigures its appearance, which the girls endeavour to prevent.

THEY accordingly moisten the part with their spittle, and rub it on their clothes, or on some hard substance; nay, the pain often causes them to tear away part of it with their teeth, which irritates it still more. They are sometimes forced to apply a poultice, or some

some more powerful remedy, to procure ease, which softens and enlarges the excrescence, by which means it becomes more spungy; and the same changes may take place in this, as in a Spina fibrofa on the feet.

IT is likewise to be met with on the other fingers; but they are not altogether so liable to it.

GIRLS are often taught to sew at first without a thimble, which may produce this complaint. The thimble sometimes fits pretty exactly; but as the girl advances, the thimble must necessarily become too small, which circumstance is often too much overlooked both by mistresses and mothers.

THESE are the only reasons which I can assign, for these grievous excrescences being produced on the fingers; and, from the strict analogy between these, and Spinæ fibrosæ on the feet, I think they may properly be admitted.

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WHAT is still more convincing, I never met with a Spina fibrofa on the fingers of the male sex.

THIS, however, I leave to my readers to determine. I by no means say, that every Spina pressa becomes a Spina fibrofa ; nor that every excrescence, on the fingers of young women, becomes a Spina fibrofa : But I have uniformly traced such as came under my care, to originate from such causes ; *viz.* that a Spina fibrofa on the feet, had formerly been a Spina pressa, and a Spina fibrofa on the fingers, an excrescence, as above.

I HAVE described, in a very concise and accurate manner, a disease, the nature of which has, from the time of Hippocrates to the present, remained a secret ; and which, as is said above, has proved fatal to several, who were unfortunately afflicted with it.

FROM a most unlimited practice, and attentive observation, I have been able to mark particularly, all the diseases of the feet. But the discovery

discovery of this, is not more honourable to myself, than beneficial to my fellow creatures, whose interests and ease have always been considered deserving of my best services. I have therefore been successful, in not only discovering, but likewise in offering, a specific cure for this truly excruciating complaint, which was unknown to both ancient and modern practitioners.

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## C A L L O S I T I E S.

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I SHALL now proceed to give an account of Callosities, which grow on the soles of our feet. This is a complaint which is very little regarded ; but it will be found to merit our attention.

SOME people are subject to these Callosities, and seem to experience little or no inconvenience from them ; while others, again, find them exceedingly troublesome and painful.

IT is generally supposed, that such Callosities are produced by pressure. I myself, for some time, entertained the same idea ; but, from unbounded

unbounded practice, and from an accurate observation on all complaints of the feet, in which I, for several years, have particularly been conversant, am enabled to assign a still more evident cause.

To make it appear more intelligible, I shall state a few observations, which will tend to throw light on this subject. I inquired at chairmen and porters, who are generally on the street, and often carry very heavy burdens, if they were subject to such Callosities? Some of them informed me, that they were subject to them; others, that they were not. I asked them, if these Callosities were attended with any inconvenience to them? They answered, that they never felt any pain, nor inconvenience, from them.

I THEN inquired at cabinet-makers, wrights, &c. whose business induces them to stand very much, if they were subject to such Callosities on the soles of their feet? They answered me as the former: Some of them having such Callosities; the greatest part, however,

however, having none: But no pain, nor inconvenience, was experienced by those who had them.

NOT satisfied with these inquiries, from these last workmen, from whom I could derive no information, because they could not be much subject to such Callosities, as they stand upon the shavings, which are soft, and preserve against pressure.

I THEN inquired at the iron-founders, who stand, during the day, at their work, where no softness can prevent pressure, as cinders, scales of iron, &c. are under their feet, from whom I expected satisfactory information. When I asked them, if they were subject to such Callosities? They answered in the very same manner as the former. I was still at a loss what to think concerning the cause of such Callosities. I thought that I might derive some information, from considering the effects of heat and cold; and, accordingly, I fixed upon the fleschers, as proper persons to inform me on this point.

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THIS class of men are subject to stand much on their feet ; and, during winter, they are obliged to move about, to keep themselves warm upon the stones.

I INQUIRED particularly at them, if they were troubled with such Callosities ? and even had the curiosity to examine the soles of their feet, which I found pretty hard and compact ; but they were no more subject to Callosities than the former.

I THEN took the opportunity of inquiring at foot-travellers, who go from place to place, during the whole year, in order to sell their goods. These men commonly carry a heavy burden ; so I supposed, that they were well calculated to inform me on this subject. Having put proper questions to them, some of them informed me, that they were very much troubled with such Callosities ; others, that they were not.

I THEN asked those that were troubled with them, if they could assign any reason for having

ing these Callosities, while others, in the same occupation, were not subjected to them? They could give me no satisfactory answer to these questions. I then asked them, what kind of shoes they wore? whether or not they were too tight? They answered, that they used wide shoes; and always put some soft substance into their points.

FROM those who were not subject to these Callosities, I learned, that they always used the neatest shoes, which fitted exactly.

HAVING now been at considerable pains in making the above inquiries, and having derived little information, I was induced to believe, that there was still something to be discovered, which tended more evidently to show the cause of such Callosities: I therefore saw the necessity of finding out something, from my own observation and practice, which might account better for their production.

WHENEVER I was employed for Spina pedum, I paid very minute attention to the Callosities

Callosities which grow on the soles of the feet, as I judged, that, in this way, I might be enabled to throw considerable light on the subject. As I had failed in procuring any satisfactory information, from all the inquiries I made, so, when I observed such Callosities, I inquired strictly at my patients, if they could inform me, how this Callosity was at first produced? or if they could assign any particular reason for bringing it on? They answered, that they could not.

I THEN asked, if these Callosities were attended with pain? Some of them told me, that they neither felt pain, nor inconvenience, from them: Others, however, acknowledged, that they were attended with both.

I THEN inquired, if they wore tight shoes? They answered, that they wore their shoes rather too wide. I continued, for some years, to examine accurately every foot which was under my care. My reasons for this attention, originated from the particular places on which they were seated, which astonished me,

as I observed that their situation was confined to particular parts; *viz.* round the edge of the heel, while the under-surface remains free from them.

THEY likewise are seated under the last joint of the metatarsal bones. I do not say, that the whole part, under the metatarsal bones, is covered with Callosities. I, however, have observed a separate Callosity at the last joint of each metatarsal bone. Again, at the ball, and round the outer edge, of the little toe, there are Callosities; but much more commonly at the ball, and under the last joint, of the big toe. A sharp-edged Callosity, likewise, is seated at the nail, and over the inner side, of the little toe.

I HAVE now enumerated all the places on which Callosities are apt to grow: and it surprised me not a little, when I considered the curious manner in which they are situated. I was of opinion, that pressure was the cause of such Callosities: But when I attended to the form of our heels, which, in the centre,

centre, are convex, and consequently most liable to pressure, yet, on this part, I never observed any Callosity ; but, on the edges, they are seated where the pressure is by no means so great.

I HAVE, however, often been consulted by patients, complaining of pain in the heel, supposing that it proceeded from a Spina pedum. I was highly gratified in being consulted for this, as I never before had observed a Spina pedum seated on the edge of the heel.

IN the beginning of my practice, when such a Callosity came under my management, I, without consideration, began to operate as for a Spina pedum ; but was very much astonished, that the patients complained of more than usual pain, than when it was a Spina. Besides, I found it more obstinate ; and it adhered so closely to the part, that it would not yield to my operation with that ease that a Spina pedum did.

THE particular symptom of the pain increased my surprise, as I observed, that though  
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the heel was surrounded with the Callosity, yet there was only one particular spot on which the pain was seated; *viz.* on the inner edge of the heel.

As a Chiropedist—whenever I observed a hard substance, I wished to remove it: But when I attempted to remove the Callosity from the outer side, the patient would not give me the trouble, as he never found any inconvenience from it.

I THEN had the curiosity to take the patient's shoe in my hand. When I was asked, for what reason I examined it? I replied, that I suspected most of the pressure would have been on the inner side; but, to my great astonishment, found the reverse, as the outer side of the shoe was very much wore down.

I HAVE frequently been consulted, to extract Spinæ pedum under the ball of the big toe, and under the ball of the little toe. Surely, I have extracted many Spinæ pedum from these places. Sometimes, however, I have operated

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as for a Spina pedum, when I found that my operation would not succeed so well ; nay, I often found it impracticable : I therefore supposed, that this substance was similar to the Callosity which I found upon the heel.

To certify myself on this head, I preserved many of these Callosities, which would not yield so well to my operation. My reason for this was, that I might investigate them accurately : So, by chemical analysis, I found, that they were entirely different from Spinæ pedum ; but were exactly the same as the Callosity which surrounds the root of a Spina.

HAVING derived some information, from the observations respecting the nature of these Callosities, I find these substances most prevalent with those people who wear the widest shoes, and walk least. This is most commonly a complaint with people advanced in life ; though I by no means say, that young people are exempt from it, though it is not so frequent with them.

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I, HOWEVER, observe, that people may have Callosities for years, without experiencing any inconveniency from them. Though they are sometimes very thick, yet they seldom give pain. Persons assist themselves, by scraping them off, either by a penknife, or their nails, while bathing their feet. Sometimes they disappear, without giving any pain. At other times, I have met with patients, who had been subject, for a considerable time, to such Callosities, without any inconvenience ; and yet, in the end, they have become very painful.

I DO not intend, in this place, to describe the mode of operation necessary for relieving these Callosities : This I leave, till I treat of Operation in general. My object is, to find out the cause of these Callosities. Having made many inquiries, and having derived some information, concerning the cause of these Callosities, I persevered in my observations ; and attended very minutely to the state of the shoes, of those who were troubled with Callosities, which I uniformly found too wide : Therefore I directed my patients, who were

were afflicted with such Callosities, to have their shoes made exactly to the size of their feet. By this means, I thought I could derive considerable information respecting the cause of these Callosities. I therefore desired my patients to acquaint me, before they put on these shoes which I had directed, that I might pare off a considerable portion of these Callosities ; at least, as much as could be done, not to cause the patient walk with pain.

IT may easily be conceived, that a person, who has continued to walk upon such a hard substance for years, must feel very considerable pain, if that substance was pared off close to the epidermis ; therefore I cautiously guarded against this extreme.

THESE patients, in the course of two or three months, called upon me, and, indeed, very genteelly thanked me, for my invention ; as they informed me, that their Callosities had not grown as before, and that they walked now much more easy. This afforded me considerable

considerable knowledge ; and I now had some foundation for supposing, that friction was the cause of these Callosities. From this period, I examined carefully the feet of all who came under my care, to find if they had Callosities, whether painful or not. Likewise, I attended particularly to their shoes ; and when I found them too large, I directed them to have their shoes made to fit exactly ; and related to them the experiment which I made, which succeeded to my wishes, and gained great applause. Some of them followed my directions : Others, again, answered, that they did not regard these Callosities, because they found no inconvenience from them, and wished to wear an easy shoe. All of them, who attended to my directions, experienced such comfort, as entitled me to their gratitude and approbation.

I SHALL, however, relate a few cases worthy of notice. Some of these patients, whom I had attended for extracting Spinæ pedum from their toes, as usual, before I let their foot out of my hands, I examined every part

part of it, when I observed Callofities at the sole. I desired them to bathe their feet, pare off that Callosity, and to have their shoes made exactly to the size of their feet. A few years after, these people applied to me, to assist them, for painful Spinæ pedum on the soles of their feet. When I looked at their foot, I saw instantly that it was a painful Callosity : So I informed them, that I could alleviate the pain ; but could not extract it as a Spina pedum, as it was a Callosity, which is quite a different substance.

THEN they informed me, that, a few years ago, I had extracted Spinæ from their toes, which had not grown again. They mentioned likewise, that I had directed them to wear a tighter shoe, which they supposed was for my benefit, as they always thought that a tight shoe was the cause of Spinæ.

I PARED off as much from that Callosity as could be done with safety ; and directed them, again, to follow my instructions.

I BEGGED the favour, that they, in the course of three or four months, would let me know how they were, with respect to the Callosities ; which they did : and thanked me for my advice, as they had been a great deal easier than before ; though they informed me, that they were not quite easy, as might reasonably be expected, as I was not capable of paring off all that Callosity. I however pared off as much as possible, and enjoined the same instructions to my patients, to which they paid very minute attention ; and, in the course of a few months thereafter, they informed me, that they had been very comfortable, and were now freed from any inconvenience whatever.

I HOWEVER begged, that, in the course of three months after this, they would let me know their state, that I might be certain of the efficacy of my system. To this they readily consented ; and communicated their relief in the most polite and grateful manner.

I SHALL now relate a more convincing case. I was consulted by a patient, to extract a painful

a painful Spina from the sole of his foot. On examining the part, I found that it was a painful Callosity; which I mentioned to the patient. He asked me, if I could be of the same service to it, as to a Spina pedum? I answered, that as I had assisted several under the same complaint, so I would endeavour to alleviate his pain.

I THEREFORE began to operate, and ventured deeper than usual in this case, in order to try if it was practicable to eradicate that Callosity completely, which would both be satisfactory to myself, and beneficial to mankind in general.

I THEN directed my patient, agreeably to my system, to wear a shoe which fitted him exactly; and begged the favour, that, in the space of four or five months, he would let me know the effect of my operation. My reason for being thus particular was, that as I had proceeded on the extreme, so I wished to be perfectly acquainted with the result. My patient however, in the space of four months, called

called upon me, and informed me, that, since that period, he had been exceedingly comfortable ; and returned me many thanks for my attention.

I CALLED upon the gentleman some time after this, to inquire after his situation. He was extremely happy to see me ; and mentioned, that he had been, for a long time, accustomed to wear a wide shoe, which he supposed was calculated to render his foot easy : but now was seriously convinced, that it was attended with as much uneasiness as when too tight ; and therefore found much relief in wearing very neat shoes.

As I have said, that there is no difference of sex or age—it may now be observed, that young people generally wear their shoes very tight. If wide shoes then, as above mentioned, be the cause of Callosities, why should they be subject to them, since they commonly wear shoes which fit exactly, nay, are rather too tight ? To this I agree. But I mean those young people, who naturally grow rapidly ;  
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on which account, the shoemaker is desired to make the shoes considerably larger. That this may be done properly, the person commonly puts on two pair of stockings; by which means, they are rather too wide, and admit of considerable friction, which produces Callosities.

I SHALL only mention another case, which will evidently demonstrate the truth of my doctrine. I was consulted by a gentleman, who complained of very severe pain in his big toe, supposing that the nail was grown into the quick. On examination, I did not think that the nail was the cause of the severe pain which he felt: but was of opinion, that it was a Concealed Spina; for which I accordingly operated, and found my observation verified. I therefore extracted it, which relieved the gentleman from pain.

I THEN, as was customary with me, examined the sole of his foot, to see if he had any Callosity. But after the most minute examination, I could only observe a small  
Callosity

Callosity under the ball of the big toe, from which I extracted the Concealed Spina. I was not a little surprised, to find that a gentleman, of more than fifty years, should have such a neat foot, free from Callosities, except that small one, below the ball of the big toe.

I THEN examined his shoes, which I likewise found amazingly neat, and fitted exactly to his foot.

I THEREFORE advised him to wear his shoes a little wider, as the tightness of them was the cause of his painful nail. He listened to my advice; and ordered his shoes to be made somewhat larger. The gentleman approved very much of my plan, as he had, during the whole course of his life, wore tight shoes, yet never was troubled with any complaint on his feet, except the Concealed Spina, mentioned above.

IN about three months after this, I received a message from him, desiring me to call at his lodging. I accordingly called upon the gentle-

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man, who informed me, that his nail, and Concealed Spina, were perfectly easy ; but mentioned, that, under the ball of the big toe, he felt very severe pain. I then asked him, if he had attended particularly to my directions ? He answered, that instantly his shoes were made larger, nay, that they were rather too wide ; which he showed me. When I examined his toe, I was astonished to find that small Callosity considerably enlarged, and in a festering condition.

My reason for giving him directions contrary to my doctrine, was, that as he was advanced to near sixty years, had travelled in foreign countries and in the warmest climates, and never had been troubled with any complaint on his feet, so I thought him a very proper person for bringing my doctrine to the test ; which, surely, in the most decisive manner, has fully established the truth of my original system.

THIS Callosity had remained on his toe longer than his memory could enable him to recollect,

recollect, and never had troubled him, while in the habit of wearing tight shoes; yet, in the course of three months, in consequence of wearing wider shoes, it had assumed a very different nature, and was become exceedingly painful.

HAVING now been pretty full upon this subject, and having been at very considerable pains and trouble in making various observations, and trying different experiments, to discover the cause of Callosities, which I have sedulously attended to; I therefore may conclude, with unerring certainty, from the above very remarkable cases, that these troublesome Callosities are produced by friction.

FORMATION  
OF  
CALLOSITIES.

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I SHALL now give a brief account of the Formation of Callosities. When a Callosity begins to form on some particular part, it seems as if the epidermis itself was somewhat thickened; but if the friction is allowed to go on, the Callosity becomes thicker, constantly increasing. Those, however, who are attentive to the bathing of their feet, and scraping it off, will find it seldom come to such a state.

ON the contrary, if persons are not in the habit of bathing their feet, or do not sometimes

times pare off part of these Callosities, they will increase to such thickness, as to fall off, sometimes in considerable pieces. Soon after, however, the Callosity grows again, and fills up the vacancy. But if they do sometimes bathe their feet, they do not choose to pare off any of these Callosities: for they suppose, that they walk easy upon these hard substances; so they fancy, that if they pared off these Callosities, they would walk tenderly. They, indeed, may walk for years, upon that Callosity, very comfortably: But if any person would promise to eradicate it, they would not part with it; for they think themselves very easy with it. They inform me, that they do not feel the hardness of the pavement, as others. But, however, when a Callosity begins to grow painful, a protuberance begins to form on some particular part of it; so that a person, in walking, feels pain in some particular part, but does not, in the beginning, regard it; so it continually grows deeper, till it becomes very painful, when the patient begins to pare off a portion from it.

IT however, in a very short time, grows up again, and seems as if nothing had been taken from it: while the protuberance is not, by this means, prevented from descending deeper; so that, in the end, it becomes exceedingly painful. I, however, have seldom seen any bad consequences originating from painful Callosities. The slightest and thinnest Callosities are most liable to grow in, and become painful. To impose upon the patience of my readers, in saying much concerning the formation of these substances, is not my intention. They, therefore, will consider the above brief sketch sufficient for my purpose, and their information.

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## OBSERVATIONS UPON THE FAMILY TOE.

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I SHALL now take into consideration what is commonly called a Family Toe. This appellation commonly belongs to the first small toe, as it is more liable to inconvenience and trouble than the other smaller toes.

THERE are different species, or kinds, of this description, which merit our attention. I do not intend to treat them as diseases: but merely to describe the reason of their direction, which is inconsistent with the form of the other toes; and to point out certain rules, by which

which the deformity may be considerably lessened, if not almost prevented.

I SHALL then, in the first place, describe the first species of a Family toe, which, though different from the other toes, is not more liable to pain, than if it had not been so deformed ; and, consequently, merits our notice upon no other account, than merely from its singularity. For instance, in some families, in which I have been employed, I have observed the first and second small toes conjoined from the first to the second joint, resembling exactly one toe, without any evident line of distinction, till at the end of the second joint, when they separate in a natural manner.

AT first I was of opinion, that the bones of these toes were ossified together ; but, upon accurate examination, found, that the integuments only caused this appearance, as these bones were separable.

THESE toes are not, on this account, liable to any inconvenience more than the other toes,

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as said above: I mention it only as a very rare occurrence; for if I had not, it might have been said of the author of such a work as this, that such a thing had either escaped his memory, or had not come under his observation. I, however, cannot affirm, that the children, of every parent who has such toes, will uniformly have the same: This I by no means say. I have frequently seen parents, who had such Family toes, having one child with similar toes, and others, not; but wherever there are such toes, they are always hereditary, and are liable to be afflicted with Spinæ, in the same manner as if they had not been deformed.

I SHALL now take into consideration the second species of the Family toe, which is much more troublesome, and is attended with more pain and inconvenience than the former.

THE reason of which is, that the toe is incapable of lying in a straight line with the other toes; for it appears as if the second joint was immovable, or as if the integuments, below the joint, were contracted, by which means

means the second joint stands considerably higher than the other toes.

THE last joint, however, lies sometimes quite flat: The big and second smaller toes lie upon it, so that they almost cover the nail of that toe, which nearly resembles the figure 7.

SOMETIMES, however, it assumes a different form: *i. e.* instead of the last joint lying flat, it takes a different position; *viz.* it is pointed downwards; and when walking, the point of the toe and nail touch the ground at the same time. This position is much more inconvenient and painful than the former; because such toes never fail to be afflicted with Spinæ pedum, but most generally with Spinæ pressæ.

I HAVE often been consulted, to extract a Spina from such a toe, upon the second joint, which, from the situation of the toe, renders it peculiarly distressing. The reason of which may be easily conceived, from the position of the toe, as this second joint projects

jects considerably higher than the other toes ; on which account, the person is under the necessity of having wider shoes than otherwise he would have had.

BUT the shoemaker seldom makes the shoe wide enough for this toe, for he judges it would appear extremely awkward, as the other foot has no such deformed toe : at least, I never saw a person who had such a toe on both feet.

THOUGH the tradesman does attend to the proper wideness of the shoe, yet when there is a Spina situated on the projecting joint of that toe, the wideness of the shoe does not prevent either friction or pressure, which, in general, causes the Spinæ go on to suppuration.

VARIOUS methods have been adopted for the purpose of procuring temporary relief, by means of plasters, poultices, &c. from which little or no advantage can be derived. At last, however, they cut a hole in the shoe, to let the projecting part out. From this plan, indeed,

deed, they obtain some relief: But the manner of obtaining an effectual cure, will be found under the head of Suppurated Spinæ.

WHEN, however, the last joint of this Family toe lies flat, as said above, the inconvenience and trouble, to be expected from it, is much less than when it stands in the other form; because, then, the point of the toe and nail touch the ground at the same time, and therefore is more distressing, as the toe projects much higher. This is not the only inconvenience attending this toe; for it seldom fails to have a Spina situated at its point, which is the cause of the pain felt on that part.

INDEPENDENT of Spinæ, the position of the toe renders it necessary that the nail should always be kept short, because this neglect may readily produce a deformed nail. No other method can be adopted to render that toe easy, except to keep it free from Spinæ, as it is impracticable to cause it lie in a straight line

with the other toes. See the Treatment of Concealed Spinæ.

THE third species of the Family Toe, merits our attention much more than the foregoing; because, by proper attention, that toe may be prevented from adopting any such form; and, besides, it is unfortunately much more liable to be injured than the other toes. The reason of which is obvious, as that toe is naturally longer, and more pliable, than the other small toes; and the fashion of our shoes is such, that they force our toes so closely, that the big and second small toes touch each other, whereby the first small toe rests upon them. If this is the case, no trouble nor inconvenience originate from it.

IF, however, it happens, on the contrary, that the big and second smaller toes rest upon the first small toe, it then gets the appellation of a Family toe, because it exhibits such an appearance as the former; *i. e.* the last joint either lies flat, or stands erect, as mentioned above.

BUT,

BUT, in reality, it is not a Family Toe, as it has been forced to assume such a direction, from the fashion of the shoes: Still, however, it is subject to the same troubles, if not duly attended to, as above mentioned. At first, the fashion of the shoe presses that toe downwards, and it may continue so for some years, without much inconvenience. In process of time, that toe becomes so habituated to this position, that it can scarcely be bent in a straight line; and, therefore, resembles a real Family toe.

I HAVE seen persons who have such toes: and so much have they been bent contrary to nature, that instead of the last joint lying flat, it has been bent in a reverse posture; *i. e.* the person walks upon the nail, so that the last joint of the toe coincides with the under-joint of the metatarsal bone.

I HAVE very often been consulted by people, who complained of great pain in the nail of such toes. In the beginning of my practice, when I observed such a toe, I was indeed

indeed very much astonished at its singular appearance.

I WAS consulted in a case of this kind, by a lady. When I examined the nail, I found it quite flat, and very thin; but, however, I could easily observe Concealed Spinæ below that nail.

THE lady asked me, if I could be of any service to her, as she, when walking, felt a pricking pain, as if there were some extraneous body below the nail. I informed her, that, in the space of ten minutes, I would relieve her from pain; because I perceived, that it was a Spina below the nail.

THE lady asked me, how it was possible for me to extract a Spina below the nail? I informed her, that it was possible; and that I should do it without pain. She was very unwilling to have any operation performed upon her nails, as she had heard, that it was dangerous to meddle with them; but having great confidence in me, she intrusted me with her case.

I THERE-

I THEREFORE proceeded to the operation, and extracted her Spina with the greatest ease. The mode of which operation, will be found under the head of Operation of Spinæ below the Nails.

THE lady indeed was highly delighted, and put on her stocking and shoe, to try if she could walk easier; and found no pain after my operation.

I, HOWEVER, took the liberty of asking her, if she could blame any thing for bringing on such a toe? She could not assign any reason. I then asked, if she knew of any of her relations who had such a toe? She assured me, that neither her parents, nor any of her relations, so far as she knew, ever had such a toe; neither any of her children. All that I could learn from her, was, that when she was young, she used to wear very narrow-pointed and high-heeled shoes, as was then the fashion, by which means the big and second smaller toes had pressed down this first small toe.

I AM of opinion, that it had assumed this direction, from the high-heeled and narrow-pointed shoes. In this way, it might have happened, in process of time, that that toe had been turned over, and maintained that position.

HER information tended to satisfy me, as I was sure that it was not a real Family toe, but had, by force, or accident, assumed this direction.

I DEEM it unnecessary to mention the trouble to which such toes are liable, as they are subject to the very same complaints as the above mentioned.

SINCE that period, I have particularly attended to this kind of toes: and whenever I was consulted, for extracting Spinæ pedum, I took particular notice of such toes, even though the patients did not consult me for them; yet when I observed such toes, I inquired, how long they had had such toes? or if they were troublesome to them? or if any of their relations had such toes?

SOME

SOME of them informed me, that they were exceedingly troublesome, which could not otherwise be, as there were Spinæ seated upon them; but assured me, that none of their relatives, so far as they knew, ever had such toes.

I THEN inquired, if they could blame any thing for producing such toes? They could assign no reason, except tight and narrow-pointed shoes.

I THEN asked, how long they had such toes? They answered, for many years. When I examined them, and attempted to stretch them, I found it entirely impracticable, as they were in the same position as if they had been hereditary, owing to the number of years they had remained in this posture.

AT others, again, when I was employed for extracting Spinæ pedum, where I observed such toes, I inquired, if they found any inconvenience from them?

THEY

THEY informed me, that they never found any inconvenience from them. I then asked, if their relations had any such toes? They assured me, that none of them ever had such a toe, so far as they could recollect. The patients told me, that if I had not questioned them concerning them, that they never would have taken notice of them. Some of them were somewhat astonished at me, for inquiring so minutely concerning their toes, as they had never experienced any inconvenience from them.

I, HOWEVER, made a polite apology for taking such liberties, as the patients, perhaps, thought, that it did not concern me. I observed to them, that I had a great number of such toes under my hand, which, in course of time, had become very troublesome to my patients; and that my motive for doing so, was, that if I could find out the cause of such toes, that I might invent a remedy, for preventing them.

SOME of them thanked me, for my attention to the welfare of the human race: Others, however,

however, laughed at my particular inquiries, because they never felt any inconvenience from them. I, however, informed them, if they did not take particular care of such toes, that at length they would become troublesome to them.

SOME of them begged me to inform them, in what way they should manage them ; others did not think they merited any attention.

SOME years after, I was employed for extracting a Spina from a toe of this description. I made the usual inquiries concerning that toe (notwithstanding that I had formerly attended that patient). The patient then informed me, that, some years ago, I had made the same inquiries : and mentioned, that I had informed her, that, in process of time, it would become troublesome, which she, at the time, spurned at ; but was now truly sorry, that she did not listen more attentively to my observations, and adopt my directions.

I REPEATEDLY inquired at others, who had followed my directions, if they had de-

rived any benefit from my advice ? Some of them informed me, that they could not satisfy me, in saying that they had received any benefit, because their toes were not troublesome to them before ; but, however, they followed my directions, which were neither very troublesome to them, nor advantageous to me, as, in fact, such advice was calculated to suppress my busines.

THEREFORE they thought, that there must be some advantage derived from my directions, which they followed ; and, in proceſs of time, I found such toes nearly in a straight line with the other toes. So I uniformly found, that when such a toe came recently under my care, and the patient followed my directions, that they were comfortable during life, and prevented much trouble to themselves.

INDEED, several of them, who had been for many years troubled with such a toe, from which I extracted Spinæ, having followed ſtrictly my direcſions, acknowledged, that they derived the greatest benefit from them ; and whenever

whenever they met me, returned me many thanks for my advice to them.

I THINK it improper to tire my readers, by relating many cases, as they are all nearly similar; therefore the above will suffice.

I DO not intend to give a complete detail of all the trials and experiments I made, in order to find out the best mode of preventing such toes from assuming such a direction: I only mean to offer that mode, which, in my extensive practice, I found the most effectual for my purpose. My plan was then performed in the following manner.

I MADE a cushion of muslin and linen, proportioned to the bend below the joint of the toe; then I took a small linen-bandage, and bound the cushion close, so that it could not remove from below, to prevent that toe from bending as before: On the contrary, it is now forced to assume a straighter direction. After continuing it in this manner for eight days, I loosen it, in order to enlarge the cushion a little

little more, and bind it as before; so that it cannot shift. This method then possesses a double advantage, as the cushion below, prevents that joint from bending, and the bandage tends to force the toe more in a straight line.

THEREFORE, a person should continue every week to increase the cushion; but not so much, as to impede his walking. If this plan be persevered in for some months, the person then should take a small piece of paper, or linen, rolled together, half an inch in length, in the form of a wax-taper, but flattened, which he must apply below the joint of the toe, in a longitudinal direction, and then place the bandage as before. If a person has patience to attend to this plan for some time, he will find, that his toe will assume a form similar to the other toes.

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SYMPTOMS  
OF  
SPINÆ PEDUM;  
AND

*Reasons why they are sometimes Easy, and at other Times Painful.*

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I SHALL now proceed to a very interesting part of this Work: *viz.* to give an account of the Symptoms of Spinæ pedum; and to state the reasons why they are sometimes easy, and at other times painful. It always is a general question, Why do Spinæ at certain times give pain, while at other times they are easy?

THERE was not a day, during the whole course of my practice, in which I did not reflect,

flect, respecting what might be the cause of this remarkable phenomenon.

I WAITED upon several medical men, for the purpose of obtaining some information concerning this point.

SOME of them informed me, that the cause of such symptoms never had been discovered ; nor was it likely, that they ever would be satisfactorily accounted for. Though many have written upon the symptoms of the gout, yet no certainty has hitherto been established, as all that has been advanced, borders more upon supposition than on fact.

SUCH information was of little service to me, as I could neither satisfy myself, nor my patients, properly : Yet I was not discouraged from persevering with attention, in this subject ; and doubted not, but I would in time, and by steady observation, become master of the subject, and favour the world with a proper analysis of this phenomenon.

IN order to accomplish this task, I found that little aid was to be expected from learned men; and therefore had recourse to these excellent monitors, Observation and Experience, which, if properly and perseveringly attended to, never fail to throw light on the obscurest points.

THEREFORE, at every patient that came under my hands, I was very particular, in inquiring into the Symptoms which they felt.

SOME informed me, that they felt most pain in warm weather; others, when the wind was easterly; and some, again, when the weather was changeable. Some felt no inconveniency from easterly winds, nor a change of weather; and only felt pain, when the weather was warm. What is still more remarkable, some people, who had Spinæ on different toes, informed me, that, in an easterly wind, or on a change of weather, they felt pain in a Spina, on one toe, and none on the other.

OTHERS,

OTHERS, again, told me, that they never felt any particular pain in an easterly wind.

SOME informed me, that they felt no pain in warm weather; that they rather felt it in cold weather. In all the inquiries which I made, I observed, that the information of one contradicted that of another. It is surely, then, no easy task, to account for the contradictory information which I received.

SOME years ago, I inquired at our late ingenious, and justly celebrated Professor of Chemistry, in the University of Edinburgh, and begged the favour of his opinion upon this subject, which he was pleased to grant; and favoured me with the following paragraph.

“ THE variations of weather, which render  
“ Corns more painful, or troublesome, than  
“ ordinary, are generally changes from dry-  
“ ness to humidity, or the near approach of  
“ such changes; and the barometer falls at  
“ the same time, shewing that the atmosphere  
“ gravitates

“ gravitates less on the surface of the earth.  
“ Now, the general effect produced in our  
“ bodies, by these conditions of the atmosphere,  
“ humidity and diminished pressure, is a re-  
“ action of the small vessels and fibres, espe-  
“ cially in the external parts; and this relaxa-  
“ tion occasions their yielding too much to  
“ the pressure of the fluids within: Hence  
“ they are overcharged: and if there are parts  
“ in which the vessels have been weakened  
“ before, by frequent congestions, these, in  
“ particular, are loaded and distended more  
“ than the rest; and to such a degree, as to  
“ excite pain. In this manner are the pains  
“ of the cold rheumatism often renewed, by  
“ changes of weather; and the parts of the  
“ skin that have been frequently vitiated and  
“ inflamed by the pressure of Corns, suffer in  
“ a similar manner.”

NOTWITHSTANDING the very ingenious and learned argument of our late celebrated Professor, concerning the cause of the pain of *Spinæ pedum*, I still find myself embarrassed concerning the propriety of his doctrine, and

am at a loss to satisfy myself, and convince my patients.

I, THEREFORE, shall offer a few remarks, which, I trust, will tend more fully to account for such phenomena, and be more applicable, and satisfactory, than any thing yet offered upon the subject.

INDEED, it is not easy to assign the true reasons for the variations of the pain, and for the contradictory information received during my practice. I shall however assign five different reasons for the variations of the pain, felt by different people.

1st, WHEN a Spina pedum begins to grow, a person feels a slight sensation of pain. It however ceases, at times, from growing; during which, a person feels no pain: But when it begins to renew its growth, the pain is more sensible, because it gradually descends, and irritates the subcutaneous vessels, which renders the pain more pungent. In such a manner, it continues its course for a considerable

siderable time: sometimes finishing its growth in three months; at other times, requiring twelve months, nay, two years. During its growth, the pain is only felt for the space of a few hours; and there is no material difference, whether in bed, or walking. Such sensation of pain, every person feels alike, there being no difference either in cold or warm weather; nor is it otherwise in different constitutions, either in young people, or those advanced in life, as the sensation of pain, during the growth of the Spina, is similar in each.

2dly, WITH regard to heat and cold. It is not easy to assign the true reason for the variations that happen in the gravity of the atmosphere, in the same place.

ONE cause of it however, either immediate or otherwise, is the heat of the sun; for when this is uniform, the changes are small, and regular. Very considerable difficulties however remain, respecting the heat and cold of the atmosphere. It seems, the changes depend upon the heat of the sun, as the barometer, between

between the tropics, constantly sinks during the day, and rises, to its former station, in the night-time. It is certain, that the heat is much more considerable about our feet, than on any other part of our body, since the body is much more exposed to the atmosphere than the feet.

THESE people, who naturally perspire much about their feet, suppose that they must be more careful about them, as, in the most intense heat, they wear worsted stockings, judging that, from a neglect of this, they would be ready to catch cold.

I HAVE shewn, in the Chemical Experiments, that when a Spina pedum is put into warm water, it extends considerably in length : In the same way, by the heat and perspiration, it increases considerably, and presses downward, and by force lacerates the superficial vessels and nerves. So, in this way, it is obvious, why some people complain of more pain in heat, than in cold.

THE truth of this is evident from the following experiment—as I myself had three  
Spinæ

Spinæ on one foot. When I felt considerable pain, I took off my shoe and stocking, and observing that my foot perspired very much, plunged it into a tub containing cold water. From this, I found relief in the space of four or five minutes: So I was sensible, that, by the application of cold, my Spinæ were considerably diminished; and I supposed, that they had returned to their former position, as I was then freed from pain.

I ALWAYS considered it fortunate that I had Spinæ, as I could easily make experiments upon myself, which, perhaps, I should have hesitated to perform upon another. The above experiment may possibly be considered too harsh, particularly by those who perspire much, and who are always apprehensive of the bad effects of cold.

I THEN determined, if ever my Spinæ should become painful again, to try a milder experiment. Agreeably to my wishes then, my Spinæ became somewhat painful again; when I began to walk pretty smart, so that my feet might

might perspire. As the warmth of my foot increased, so, proportionally, did the pain of my Spinæ become more severe.

AT last, however, they became so very painful, that I was incapable of walking freely. I therefore looked for a convenient place in the fields, to seat myself: and, taking off my shoe and stocking, exposed my foot to the atmosphere; from which, in the space of a few minutes, I obtained respite from pain.

THOSE who wish to be satisfied of the effect of this, may with safety make the experiment.

WE have an example somewhat similar to this, in the potter's kiln, where, after the vessels have been intensely heated for some time, and the fire withdrawn, the cooling always begins at the bottom; and those which stand lowermost, will often be quite black, while all the upper part of the furnace, and the vessels next to it, are of a bright red.

IT is well known, that some people have cold feet, and never do perspire, even in the warmest day in summer. Those people who constitutionally have cold feet, seldom or never wear two pairs of stockings, so far as I know, even in the coldest day in winter; because they are not apprehensive of catching cold, which is not so hurtful to them, as to those who have perspirable feet.

THIS appears evident, as some complain very much of pain in their Spinæ, in warm weather, while the others have no such sensation: *i. e.* Those who have naturally cold feet, do not feel any symptoms of pain in warm weather, but endure pain when the weather is cold.

3dly, PRESSURE, or weight of the atmosphere, is undoubtedly one of the most evident causes of the pain of Spinæ. It is evident, that the mass of the atmosphere, in common with all other matter, must be endowed with pressure. This principle was asserted by almost all philosophers, both ancient and modern; by which we came to the proof, not only

only that the atmosphere is endowed with pressure, but also what the measure and quantity of that pressure is. Thus it is found, that the pressure of the atmosphere sustains a column of quicksilver, in the tube of the barometer, of about thirty inches in height: It therefore follows, that the whole pressure of the atmosphere is equal to the weight of a column of quicksilver, of an equal base, and thirty inches in height; and because a cubical inch of quicksilver is found to weigh nearly a half-pound Avoirdupois, therefore the whole thirty inches, or the weight of the atmosphere on every square inch of the surface, is equal to fifteen pounds. Hence also it appears, that the pressure upon the human body must be very considerable; for every square inch sustains the pressure of fifteen pounds: Every square foot will sustain one hundred and forty-four times as much, or two thousand one hundred and sixty pounds. Then, if the whole surface of a man's body be supposed to contain fifteen square feet, which is pretty near the truth, he must sustain fifteen times two thousand one hundred and sixty, or thirty-

two thousand four hundred pounds ; that is, nearly fourteen and a half tons weight, for his ordinary load. By this enormous pressure, we should undoubtedly be crushed in a moment, if all parts of our bodies were not filled either with air, or some other elastic fluid, the spring of which is just sufficient to counterbalance the weight of the atmosphere. But whatever the fluids may be, it is certain, that it is just able to counteract the weight of the atmosphere, and no more. The difference in the weight of the air, which our bodies sustain at one time more than another, is also very considerable, from the natural change in the state of the atmosphere. When the air is so heavy, it is evident, that our integuments, &c. are considerably relaxed ; by this means it may easily be conceived, that the pressure must have a considerable effect upon a Spina, because, in this state, it presses deeper, and irritates the subjacent vessels, nerves, &c. It is also evident, that, to this cause, the severe pain which people feel from their *Spinæ*, while in bed, must be referred. Any one may easily perceive the truth of my observations, as when

the height of the air diminishes, the weather is bad, and people feel a listlessness and inactivity about them, especially when these changes take place very suddenly ; for it is to this circumstance chiefly, that sensation of uneasiness, and pain, are always felt from a Spina pedum.

4thly, BUT, on the contrary, on the increase of the natural weight, the weather is commonly fine, and we feel ourselves, what we call, braced, and more alert and active ; by this means, our integuments, &c. become quite firm, so that the Spina is forced to withdraw itself from its former deep position, to which it was forced by the pressure. In thus rising, it irritates the same vessels as when forced down, till it comes to its former situation, when it becomes easier ; therefore it is evident, why people complain of pain on the change of weather.

LASTLY, Mechanical force is another self-evident exciting cause of pain, to which every person, subject to Spinæ, can attest. For instance,

stance, a person, after having for some time wore a pair of shoes, becomes accustomed to ease, owing to a groove which the Spina gradually makes in the leather. In this way, he enjoys considerable ease; but when he puts on new shoes, then the pressure, occasioned by the smoothness and firmness of the leather, considerably irritates and presses down the Spina, which creates pain and uneasiness, in the same manner as above described.

THEREFORE, from the above delineation, I judge no person will be at a loss to give a pretty plausible account of the pain attending Spinæ, in different seasons, and under various circumstances; as I have spared no pains in describing, in the most original and evident manner, the various symptoms, produced by different causes, which seem the most appropriate of any thing that ever was offered upon this interesting and truly intricate subject.

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OF

## N A I L S

IN

G E N E R A L.

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I SHALL now proceed to give an account of the Nails in general, and of the diseases and accidents to which they are liable. I do not intend to give an anatomical description of the Nails; but shall confine myself merely to their origin, texture, and the peculiar changes they undergo by age.

VARIOUS opinions and conjectures have been offered, to elucidate the origin of the Nails; but little or no information can be derived

derived from the theory, either of the ancient or modern authors, upon this subject.

EVERY new argument, indeed, has met with approbation ; and, from the most ancient physiologists to those of the present time, it appears, that the doctrine has been received, and, as it were, copied after, more from fancy, than from a knowledge of the subject.

I THEREFORE shall endeavour to give a more plausible account of them than has yet been attempted. Before I thought of publishing on this subject, I was at considerable pains in consulting both ancient and modern authors upon the Nails, as my business led me to be more conversant in their management than any other medical man. I, however, am sorry to say, that my attention was but ill rewarded, as I could derive no benefit, nor information whatever, from the most popular publication. None of them, so far as I recollect, have offered a single hint concerning their management ; which not a little surprised me, as I find that there are many severe complaints,

complaints, occasioned by neglect, or from accidents happening to the Nails, which, if not properly treated, would prove productive of the worst consequences, as, in my practice, has been repeatedly verified.

I THEREFORE have no scruple in saying, that many thousands of our fellow-creatures have lost their lives, by inattention to the nails ; and, indeed, when I consider the danger attending such an oversight, or neglect, am bold to state, that, in the present time, independent of the improved state of the chirurgical art, thousands are yet liable to fall victims to this complaint, the nature and cure of which no author has investigated, or proposed.

I THEREFORE hope, from these weighty considerations, that I am perfectly justifiable in deviating from the theory of my predecessors and cotemporaries, as it is intended for the comfort of mankind.

To render this dissertation intelligible to readers of every description, I shall reduce them

them to the three following orders, and treat each of them separately.

1st, I SHALL consider them, from infancy to twenty or thirty years; 2dly, From that period to old age; and lastly, I shall consider them in their deformed state. I shall therefore begin to treat of them in the earliest stage.

WHEN a child is received into the world, its nails are in such a regular and complete state, that they are capable of being pared; so they continue their growth, without interruption, during life, though they are liable to undergo various changes from certain diseases and accidents, as small-pox, measles, fevers, &c. but without any material injury.

THE small-pox is a severe inflammatory disease; and, indeed, the whole body may be properly considered one continued ulcer. The effects produced by this disease, are well marked by authors. Though it produces many changes, yet it by no means seems to have

have the smallest tendency in preventing the growth of the Nails, although the pustules are situated under them, which, we might suppose, would have some effect in loosening the Nails, and in bringing them out. On the contrary, they seem to grow without interruption.

MEASLES is likewise a very inflammatory disease, in general more severe than the former, and leaves evident marks of its severity on different parts of the body, as ulcers, &c.

IN white swelling, a disease liable to young and old, we observe the limb very much impaired, and the integuments rendered very dry; yet the nails continue to grow with as much regularity as those of the other limb, which is not affected.

LIKEWISE, persons who have ulcerated legs, which remain incurable for years, nay, for life: Some of them swell considerably, others seem to waste away gradually; yet this proves no obstacle to the growth of the Nails.

RHEUMATISM and gout are very severe diseases ; particularly the gout, which, at first, commonly attacks the joint of the big toe, producing inflammation and swelling. So severe is this disease, that a Natural Spina pedum falls out, while a Spina pressa remains ; and the Nails, untouched by it, continue to grow.

THOSE who labour under malignant diseases for months, are often so much exhausted, that nothing but skin and bone are observable ; yet in them, during the course of the disease, the growth of the Nails is by no means interrupted.

To put the truth of my observation beyond all doubt, I shall relate a convincing case. A gentleman was attacked with a putrid fever, which was protracted to such a length of time, and was attended with such alarming symptoms, that his physicians were under the necessity of forming the most unfavourable prognosis, and even left the case entirely to nature.

HE laboured under this complaint three months, when he became a little recovered ; and began to find considerable inconvenience from his Nails, which, by the motion of his feet, were entangled with the bed-clothes.

HE therefore desired his servant, to examine in what way his Nails were thus incommoded by the bed-clothes. The servant complied with his master's orders ; and informed him, that his Nails were by far two long. He then desired his servant to take the scissors, and cut them shorter ; which he attempted ; but the gentleman complained of pain : and the servant informed him, that his Nails were become so hard, that he was under the necessity of using very great force to cut them, which caused the pain. His master then desired him to desist, and to send for me.

I WAS accordingly sent for ; and went, and was taken into his bed-chamber, where I observed a sick person.

I SAID, " You, surely, have made a mistake, as I do not practise physic." The gentleman

gentleman desired me to come in, as he wished me to rectify his Nails, as they were exceedingly troublesome. I was greatly astonished to see him in such a situation, as I had formerly seen him in a very healthy habit of body, which prevented me from knowing him in the emaciated state in which he lay.

I THEN examined his Nails, and found them very long, and much harder than formerly. Notwithstanding the very reduced state of his body, yet, what is remarkable, I found that his Nails had not been interrupted in their growth; but that they were become much thicker and harder than they were, when he was in a healthy state.

I HAVE now mentioned a few obstinate diseases, which very much impair the animal functions, and leave permanent marks of their severity behind them: Yet I have proved, that the Nails continue to grow; and seem not to be influenced by them, to such a degree as to retard their growth.

THE

THE growth of the Nails, then, must be very remarkable: But it is no less surprising than true, that every author has overlooked this subject; which, in my opinion, merits particular attention.

WITHOUT assistance from others, I shall therefore endeavour to investigate this point, with as much perspicuity and accuracy as my judgment, and an extensive practice, shall enable me.

WHEN an infant is born, as is said above, the Nails are completely formed, and fit to be pared; and as the child continues to grow, accordingly, the Nails grow uniformly in length and breadth.

BUT when we have arrived at our natural standard, our Nails then continue to grow in length, but not in breadth.

I SHALL now, in a cursory manner, consider the arguments of the most ancient authors upon this subject; and shall offer objections to

to them, which will tend more fully to establish the truth of my doctrine.

HIPPOCRATES, the founder of physic, says, that the Nails originate, and are formed, from the veins, arteries, and cutis, of the hand, which enclose the extremities of the veins, so that they cannot increase farther, and that the one cannot exceed the other.

IN another place, he contends, that the Nails are formed from a gelatinous humour, which flows from the bone, by the intervention of something warm, which hardens that substance.

To offer a complete refutation of this celebrated physician's doctrine, would be nugatory, as the circulation of the blood was not understood in his time ; therefore it is not surprising, that he should have given such an account of the Nails.

ARISTOTLE says, that the Nails are derived from bone and flesh ; and affirms, that they are

are composed of both. To controvert this doctrine, requires very little ingenuity or judgment, as it is impossible that the bones can afford any nourishment to the Nails, when they are dependent upon certain vessels for their own nourishment. As for the flesh—the Nails are so placed, that they lie directly between the cuticle and cutis vera, and have no particular connection with it, more than with the other integuments. Hence he appears to have spoken without due consideration upon the subject.

GALEN is quite at a loss what to think of the generation of the Nails; but seems to suppose, that they receive their nourishment, sensation, and life (like other parts), from nerves, veins, and arteries.

THAT nails have sensation, is to me a new doctrine, which indeed I cannot conceive; neither can the arguments of such a celebrated author as Galen, convince me.

OTHERS again, more modern, offer different arguments: Some supposing, that the

Nails

Nails are the productions of the cutaneous papillæ: and others, that they are a continuation of the epidermis; or that they derive their nourishment from the true skin, or from the corpus adiposum. Others, on the contrary, affirm, that they derive their nutrition in the same manner as the hair. How can I suppose, that the Nails are a continuation of the epidermis?

THE epidermis is a thin insensible membrane, possessing no vessels whatever. How then can the Nails derive any nourishment from, or be a continuation of it?

THEY are said to derive their nourishment from the cutis vera. This I shall attend to, in the treatment of Comparative Nails.

AGAIN, they say, that they derive their nourishment from the corpus adiposum. Surely they cannot derive their nourishment from this substance, as the beginning of the Nails is seated below the cuticle; and therefore they never touch the corpus adiposum. How then is it possible,

possible, that they can derive their nourishment from it?

OTHERS again suppose, that they derive their nourishment from the papillæ, as the hairs do, which I shall prove to be quite the reverse. Such are the opinions of both ancient and modern authors upon this subject. To confute them more fully, would be in vain, as the attentive reader has already observed, how completely they contradict each other, and how improperly some of them have thought and spoken on the subject.

SOME of them, indeed, have made a bold attempt to render their doctrine, in appearance, pretty certain, by particularly mentioning the surrounding integuments, or parts, as veins, arteries, nerves, &c.

THIS doctrine might perhaps appear very plausible in their days: But, surely, no man, versed in anatomy, can suppose, that the Nails partake of all these in their growth.

ARISTOTLE

ARISTOTLE seems still more certain of his doctrine, when he affirms, that they are composed of flesh and bone. Indeed, when I consider his observation, I believe he is right, as flesh and bone constitute our frame chiefly.

I WOULD have been highly pleased, if these eminent authors had given us any thing from observation, or had stated any certain reason for their doctrine. Instead of this, they speak merely from supposition, as every person would do, who knows no better; *viz.* that the Nails are produced from flesh and bone.

HAVING now candidly stated the opinions of authors concerning the growth of the Nails, and, as I judge, demonstrated the insufficiency of their doctrine, I shall proceed to offer an opposite argument, by which I hope to convince my readers, that this subject has never before been properly treated; and which will appear much more consistent with the determinate order of nature.

IT perhaps will be considered bold in me, to oppose the doctrine of such celebrated and ingenious authors; but it surely would appear extremely nugatory, to publish a book merely with a transcription from them: Therefore, although my doctrine should be exceptionable, and afford room for criticism, it will tend to investigate a point in anatomy, on which authors have not yet touched; which will be productive of considerable advantage to that useful science.

THEREFORE, I shall proceed to state my doctrine in the following manner: *viz.* That the Nails derive, from a certain reservoir, nourishment, which forwards their growth, and tends to preserve them from disease; which if otherwise, they would, surely, either cease to grow, or lose that healthy appearance which, even in the diseased state of the body, they commonly retain.

THIS fact being then established, *viz.* That there is a certain nutritious principle, which gives origin to, and supports during life, the

Nails

Nails—my next step is, to demonstrate this reservoir, and to assign proofs, to substantiate the propriety of my argument.

FROM a very unlimited practice in the Nails, both in patients of tender years and advanced age, and from a very accurate and steady attention to the various changes which these substances undergo, I am perfectly convinced, that they derive their nourishment from, and continue to be supported by, that beautiful substance, termed by ancient anatomists, *Rete Mucosum*; but more properly by the moderns, *Corpus Mucosum*. The origin of this mucous substance has not hitherto been sufficiently explained; nor has it been fully determined, what purpose it serves in the human body.

HALLER thinks it probable, that it is composed of a humour exuding from the surface of the *cutis vera*. This substance covers every part of the true skin, except under the Nails, which is the subject of my present consideration.

tion. But the beginning of the Nails \* evidently coincides with the corpus mucosum, which is a mucilaginous viscid substance.

IT is of a semi-transparent colour ; which induced me to consider it the origin of the Nails, as I uniformly found, in Nails which I cut from the very beginning, that the colour of the beginning of the Nails, nearly resembled the colour of the corpus mucosum. While investigating the subject of the Nails, I was induced to pay very minute attention to their nature, texture, and colour ; which last, cost me considerable trouble :

FOR I uniformly found, that the Nails of quadrupedes were regulated in their colour, by the colour of the hair of the animal ; as in a white dog, I always found his Nails of the same colour, and *vice versa*. The same obser-

\* What I call the beginning of the Nails, has been, and to this day is, called the Root of the Nails, which, however, I consider very improper ; as every thing that has a root, if torn out, never grows again : But if the Nails fall out, by accident, or any other cause, they begin to grow as usual.

vation holds good in birds; as a black fowl has always black Nails, and *vice versa*.

FROM this it would appear, that the colour of the Nails, of these animals, depend upon the colour of the hair and feathers: Therefore I am convinced, that the Nails of animals originate from the same source which produces the hair and feathers. Allowing the above observations to be perfectly just, does it appear, that human Nails are regulated in the same manner? Were it so, it would be no difficult matter to account for them. On the contrary, notwithstanding the variety of constitution and colour of Europeans, we find, that the Nails are by no means either altered or modified; as in a person of a florid countenance, and who has very red hair, his Nails are exactly similar in colour, to those of a person of quite an opposite appearance.

THE black natives of Africa, have remarkably black hair and skins; yet their Nails are not so black as either.

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THE Mulattoes have hair as black as the former ; yet their skins, and Nails, are not so dark as those of the African.

IT was, and continues to be the opinion of physiologists, that the corpus mucosum constitutes the difference of colour between the African and European. If so, surely it tends to establish the truth of my doctrine ; *viz.* that by it, the Nails are supported.

I SHALL establish the truth of my doctrine more fully, by comparing our Nails with those of animals, which are of the same substance, yet do not grow as ours. The Nails of these animals, when young, are in proportion to their size ; but as they continue to increase, so the Nails increase in the same proportion ; and when they have completed their growth, the Nails cease to grow.

As a proof of this, I have taken very particular observation of dogs, because they are naturally inclined to run very much about, during life : But I have not found, that the

Nails

Nails of an old dog, which has run for many years, were shorter than those of a dog which had only completed his growth. Watch-dogs are confined by a chain, during the greatest part of their lives, and have no opportunity of running about, as other dogs ; yet I could not observe, that their Nails were longer than those which run about. Therefore it cannot surely be supposed, that the Nails are wore off, by running, as I find, that the nails of those confined, are not longer than those of the former.

THE lap-dog is seldom put to the trouble to run about, unless upon the carpet, or sometimes, in a very slow and easy pace, upon the pavement, in company with its mistress, who seldom permits him to be fatigued with walking far, as she often carries him in her arms ; and he commonly sits upon a chair, or pillow : Yet I have not observed his Nails longer than the Nails of those which run much about.

I HAVE visited the menages of those people who travel about with live animals, and examined

examined the Nails of lions, leopards, and tigers; but never found their Nails longer than they naturally should be. They have no opportunity of wearing, or scratching with them, to render them shorter; and I have every reason to believe, that they are no longer in this state, than they are, when these animals run about in a wild state.

IT would be troublesome to the reader, if I was to enumerate animals of different species, as I have examined a variety of them, and have not found, that their Nails were longer than they should be. On the contrary, they uniformly coincide with the size of their paws.

THE cat, a well known domestic animal, possesses very remarkable muscular power, peculiar to its species, being capable of extending and contracting its Nails at pleasure. It seldom uses its Nails, except when engaged in playing, or in catching its prey. Yet its Nails are no longer than the natural size of its feet; though we might think that

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its Nails would increase in length, as it does not make much use of them.

I SHALL now mention another species of animals, which will tend more fully to illustrate this subject, as mice, rats, and the mole.

THIS last-mentioned animal is engaged, during the greater part of its life, in constructing subterraneous habitations, which, when completely finished, it is often forced to abandon, either from the pursuits of mankind, or from inundation; so it is obliged to fix upon, and construct, another habitation. To accomplish this purpose, a short time is only necessary, as nature has furnished it with very long Nails, by which it is capable of undermining with great expedition; so, in this way, it uses the greatest force with its feet, till it has completely finished its place of residence. This animal, then, is engaged, by far the greatest part of its life, in scratching with its feet and Nails; yet I have not observed, that they are either longer, or shorter, than they should be.

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As a still more convincing proof of my doctrine, I shall mention the land and sea bears.

THE land-bear is very much engaged in running about, and in climbing high mountains, rocks, and trees, which he performs by the use of his Nails.

THE sea-bear, on the contrary, is employed, in search of his prey, in the water, and is not disposed to climb rocks, mountains, &c. as the former; so he very little uses his Nails: Yet they are no longer than those of the land-bear.

THE above selection, of four-footed animals, will suffice, to prove the propriety of my argument; *viz.* that their Nails do not grow beyond their natural standard.

I SHALL now offer a few remarks concerning the bird kind.

THE ostrich is the largest bird, and is not capable of flying; but is found to walk, or run,

run, in deserts, or sandy grounds: Yet her Nails seem to grow in proportion to the size of her toes. When she has completed her growth, her Nails, then, cease from growing. Though naturally heavy, and incapable of flying, yet she very seldom rests: We might therefore naturally suppose, that her Nails would wear away. On the contrary, I have examined live ostriches, belonging to people who exhibited them for gain; yet I have not observed, that the Nails, of these ostriches which are confined, are longer than the Nails of those which run about in a wild state, so far as information, from people who have seen numbers of them, enables me to judge.

THE cassowary, the dodo, the eagle, the condor, the vulture, the falcon kind, the butcher-bird, and the owl kind, are large and heavy. To give an account of the above birds, I do not judge it necessary. Some of them fly much, while others are incapable of it: Yet I find no difference in their Nails, which

which correspond with the growth of their claws.

I SHALL now mention a few fowls with which we are better acquainted, which are engaged the whole day in scratching for their food ; yet I have not found, that their Nails are shorter, or have been wore off, by this exercise :

NAMELY, the goose, duck, and swan. These fowls are not in the habit of scratching ; and when walking, they do not rub so much upon the ground with their Nails as the former do. They are inclined to swim a good part of their lives, providing they can procure water. Yet their Nails are scarcely so long, in proportion, as those of the fowls above mentioned ; particularly the swan, which swims during the greatest part of its life. Indeed, except when hatching its young, it is constantly swimming.

WE should naturally suppose, that these birds would have the longest Nails, because they

they seldom walk upon the ground. It is said, that the swan lives to an extraordinary age; *viz.* to more than an hundred years: Yet it never has been observed, that the Nails of an old one, are longer than those of one whose age is only twelve months; that is, the Nails are in proportion to the size of their toes. So long as this animal continues to grow, so the Nails grow proportionally; but when the animal has completed its growth, then the Nails cease to grow. Neither can it be argued, that these animals wear them off by walking, or scratching, as I have clearly proved, that these animals that use them most, have longer Nails than those which use them comparatively less, as is mentioned above: Therefore I am fully convinced, that the Nails do not derive their nourishment from the cutis vera, as is argued by several eminent authors; because, from the above animals, which have no other skin than the cutis vera, it would appear, that their Nails would grow continually like ours, were it true, that they derived their nourishment from the cutis vera.

HAVING

HAVING now been at considerable pains in demonstrating, that our Nails neither derive their nourishment from the cuticle, the papillæ, nor cutis vera, I, therefore, with certainty conclude, that they originate from, and continue to be supported by, the corpus mucosum.

THEREFORE, from the above arguments, it appears, that I have delineated this subject more fully, and with more certainty, than any other author; and may be allowed to claim an original title to a discovery, concerning which no medical author has given the slightest hint.

IT may perhaps be said, by persons who have birds in cages, that their Nails grow. This I grant; but at the same time affirm, that the same species of birds, which fly at liberty, never have their Nails longer, nor shorter, than nature intended: Therefore, it must undoubtedly be owing to the change which they undergo from confinement.

AGAIN,

AGAIN, it may be said, that I have stated, that the Nails of animals do not grow: and it may be urged, that their Nails are of a quite different form; and that if they had Nails in the form of ours, that they would grow.

THE monkey, then, has Nails similar in form to ours. I made very strict inquiry concerning this animal, in order to discover whether or not its Nails did grow. It was somewhat troublesome to me, to satisfy myself upon this point, as these animals are but rare in this country. I, however, examined every menage, containing live animals; and inquired at every person, who travels with them for gain, if they could inform me on this head.

SOME informed me, that they did grow; others could not tell me, as they had not taken any notice of them. But I happened to become acquainted with a gentleman, who keeps a monkey from fancy, of whom I made the same inquiry. He told me, that neither he, nor his family, had ever observed any such thing.

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I EXAMINED strictly his toes and fingers, to see if I could observe any projection; but in vain, as they did not project in the smallest degree.

I THEN inquired, if they had ever observed it biting off its Nails. They could not satisfy me on this point, though they had often observed it putting its fingers in its mouth; but they did not know for what purpose. I begged the favour of one of the family to pay attention to it, and to observe if it bites off its Nails, as I wished particularly to know, if they grow as our Nails. I called every week for some time, to get information; but none of the family had observed it biting off its Nails. To be convinced of this, I took a needle, and made a mark on some of his Nails; as I thought, if this scratch disappeared, the Nails did grow, and that the monkey had bitten it off. I repeatedly called, and examined its Nails; but found that the mark never disappeared: therefore was convinced, that his Nails did not grow.

I, BY dissection, discovered, that this animal had no corpus mucosum ; and that it only, as other animals, has the true skin.

To establish more fully the truth of my doctrine : It sometimes happens, that the Nails fall out, in a severe leprosy : that is, when the ulcers are near the Nails, which prevent the corpus mucosum from giving any more nourishment to them ; therefore they must undoubtedly fall out.

IN consumption, likewise, the Nails cease to grow ; and as the disease advances, so their growth is retarded, which is often overlooked by the attendants.

BUT it is a well known fact, that, in the last stages of this disease, the Nails fall entirely out ; because the corpus mucosum is quite exhausted, and can afford no more nourishment to them.

IT sometimes happens however, that this disease proves fatal, and yet the Nails do not

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fall out; but they lose their natural appearance, and become shrivelled. I have often met with Nails of this kind; and was curious enough to investigate this point, by dissecting a number of toes, &c. which had such Nails. I found, that they adhered closely to the bone, while at the beginning, they were quite loose.

THE late Dr. Cullen takes notice, in paragraph 860, "That the falling off of the hair, " and the adunque form of the Nails, are " always symptoms of the want of nourish- " ment."

IF this adhesion of the Nails to the bone did not happen, there perhaps would not be a single case, in which they would not fall out in this disease.

I HAVE formerly mentioned a few obstinate diseases, in which the Nails continue to grow without interruption; but from these two diseases, in which they fall out, I am certain,  
that

that it is owing to the wasting of that substance: Therefore, I am not only convinced of the truth of my observation, but have, as I think, clearly proved, that the Nails are supported by the corpus mucosum.

*Substance of the NAILS.*

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HAVING been at very considerable pains in elucidating the origin and growth of the Nails, I shall now proceed, agreeably to my plan, to offer a few remarks concerning their substance.

IT is the opinion of medical men, that they are of a horny substance, or of a fibrous texture.

I CANNOT altogether agree with those who consider the Nails a horny substance, because the horns of an animal proceed a certain length only, which is not the case with our Nails, as stated above ; hence they cannot be of the same nature.

LIKEWISE, a person, from running furiously, has often had the misfortune of having his

his Nail pushed out ; yet we find, that it grows again : But when the horn of an animal accidentally comes out from the root, which sometimes happens, it never grows again. Nay, what is still more convincing, an animal, from excess in diversion, or fury in fighting, has often the misfortune of having his horn broken by the middle ; and when this happens, the horn never grows again. Hence we may mark an evident distinction between these substances.

AGAIN, when a horn is heated, the workman is capable of putting it into any shape he pleases ; and, by holding it in that position till cold, it retains that form.

I HAVE boiled a Nail for a considerable time, and bent it in a position contrary to its natural form, keeping it so till it became cold ; but it returned to its former position.

To convince my readers more fully, that Nails are not of a horny substance : On the Continent of Europe, the farmers make more use

use of oxen than horses, for ploughing. They are particularly fond, that these animals should have their horns in a singular form ; that is, they wish to have the points of the horns directed towards the tail of the animal.

WHEN the horns are naturally inclined either forwards, or in a lateral direction, the farrier is employed to regulate them ; which he executes by means of an iron tube, which is heated : Into this, the horn being oiled, is placed, and is continued there, without touching the horn, till the animal shews signs of the pain produced by the heat, when the iron tube is instantly withdrawn : and a wooden instrument, with a handle for the purpose, is placed over the horn, by which means the farrier bends it according to the farmer's directions ; and the horn thus receives a different shape, which it constantly retains.

So great is the difference between the substance of the Nails and horns, that the latter, even in a live animal, may be bent in any direction.

BUT

BUT it perhaps may be said, that it is by very intense heat that they are thus bent. Surely, the horns of a live animal cannot receive very much heat, as the internal part is so very sensible, that a slight heat renders the animal uneasy; yet we find, that they may be bent in this way, and retain the position in which they are placed.

SOME however affirm, that the Nails are of a fibrous texture (to which I disagree); because they say, that the fibres take a longitudinal direction. To disprove this opinion is a very easy matter, as I shall shew.

IN Nails of the First Order, when they become somewhat too long, we seldom take the trouble to use a knife, or scissors, to take off the projecting part: Instead of this, we seize it with the Nails of our fingers, and tear it off with ease.

Now, if, as anatomists say, the Nails were of a fibrous texture, and take a longitudinal direction, it is evident, that we would not be able

able to tear them transversely: On the contrary, according to the course of the fibres, they would naturally tear towards the beginning of the Nails, which, however, is not the case.

AGAIN, it is said, that the Nails are produced from the same source as the hairs.

To this doctrine I would readily agree, if I had not sufficient proof of the contrary.

IN putrid diseases, it is well known, that when a patient is recovered, his hairs fall off, and grow again, while the Nails do not fall off; but, on the contrary, they continue their growth.

LIKEWISE, every one knows, that there are bald-headed people, who have lost their hair, when free from any disease.

THEREFORE it is evident, that the hairs do not derive their nourishment from the same substance as the Nails do.

HAVING

HAVING now clearly proved, that the Nails are neither of a horny substance, nor of a fibrous texture, therefore I may say with certainty, that they are a continuation of the corpus mucosum.

*The Second Order of the NAILS.*

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I SHALL now proceed to give an account of the Second Order of the Nails. When we arrive at the age of maturity, our Nails become harder, and their colour is somewhat different from the First. Those of the Second Order, are, by anatomists, supposed to be fibrous, because they have such an appearance. When we arrive at this period, we are no more capable of tearing any part from our Nails, as they have assumed more hardness, and thickness, than in the First Order.

THE hardness of the Nails does not always take place at stated periods, as in some people of thirty years of age, they are as hard as in others of fifty or sixty years. In this Second Order, our Nails are not so liable to grow into the quick, as the Nails of the First Order are ; because

because nature has furnished us with a peculiar substance, which I term *Unguis Spongiosus*, which substance has been entirely overlooked by both ancient and modern anatomists.

THE colour of this substance is of a brownish yellow hue, and grows below the Nail of the big toe. In some people, this substance begins to grow when they are thirty years of age, and continues during life.

IN others, it may begin to grow about the age of forty or fifty years; and in some, this substance never does take place. Those people, whom nature has furnished with this substance, may think it, at times, very troublesome; as, in some, it grows very rapidly and thick, so that they are sometimes, when paring their Nails, obliged to work away that spongy substance from below them.

OTHERS, in whom it does not grow so rapidly, or so thick, think very little of it, because they do not know its utility. If nature had not furnished us with this substance,

stance, we would uniformly incur the danger of having the Nails grown into the quick; because, in this second stage, the Nails become very hard, and lie very closely to the cutis: Therefore, we must consider the Unguis Spongiosus as a blessing to us who have it, because it grows from the beginning towards the end of the Nail, and is seated exactly below the edge of the Nail; as if a person had mechanically placed a piece of cotton below the edge of it, to prevent the Nail from entering into the quick. Every person who has this substance, supposes that it grows from the flesh, below the Nail: On the contrary, it grows from the under-part of the Nail, to which it closely adheres, and has no connection whatever with the flesh.

IT however grows much more on the inner side, below the Nail, than on the outer side. I cannot however affirm, that this Unguis Spongiosus is common to every person: I speak no farther, than as one who has had an unparalleled practice, during which, I have constantly examined the feet of my patients, and

and found it pretty uniform. I have, however, seen people, past the age of fifty years, who had not this substance.

THUS I have deemed it proper to give a brief account of the Second Order of the Nails, because they are not so liable to grow into the quick, as Nails of the First Order are.

*Deformed NAILS.*

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I SHALL now proceed to consider Deformed Nails, which is the Third Order.

IN the beginning of my practice, when I was consulted respecting Deformed Nails (that is, when they become so very thick and hard, that the person is no longer capable to assist himself), I was frequently asked, what was the cause of such Deformed Nails ?

TO answer properly this question, was indeed a difficult matter for me ; therefore I inquired at Midwives, and the Professor of Midwifery, if they had ever observed a Deformed Nail on an infant ? They informed me, that they never had observed any such thing ; but had frequently seen fingers, toes, nay, every member of the body, deformed.

Indeed,

Indeed, I have often seen an additional finger and toe, which is a considerable deviation from nature; yet the Nails were perfectly regular. What is still more remarkable, I have seen a person, who wants the last joints of his fingers, on one hand; yet the Nails are as regular as those of the other hand, which is perfectly well formed. Hence our Nails must be a very singular substance indeed, both on account of their growth and regularity.

I WAS now quite at a loss what to think might be the cause of a Deformed Nail. During the course of my practice, I examined accurately every foot that came into my hands, and likewise attended particularly to the Nails, whenever I observed them deformed in the smallest degree. I questioned my patients, if they could blame any thing for producing such Deformed Nails? Some of them informed me, that a horse had trode upon their toe, and bruised it so much, that the Nail gradually grew out, and became deformed.

OTHERS, again, informed me, that a heavy body had fallen upon their toe; in consequence

quence of which, the Nail became black, and, in the space of time, came off; and the succeeding Nail was deformed, and much thicker than the former.

OTHERS informed me, that, while dancing, some person had unfortunately trode upon their toes, to which, at the time, they paid very little attention; but, in the morning, were much alarmed, to observe their Nail black. I then inquired, if the Nail had come off? They told me, that it had not: but said, that it had gradually advanced forward, till the black part was completely pared off; and that the succeeding part had become much thicker than the former, and had assumed a deformed direction. All of them indeed informed me, that their Nails were become so hard and thick, that they were no longer able to pare them.

WHEREVER I was known, it was allowed that I particularly excelled in the operation of paring the Nails, which I execute with nicety; and, what is still more gratifying, without giving

giving the least pain, which no surgeon, nor patient, can do with such dexterity.

IT is not surprising, that a surgeon is not so expert in this line, as it is not his business ; neither has he proper instruments for executing the operation.

I SHALL now mention a few remarkable cases which came under my care.

I WAS employed by a gentleman, who had a very hard and thick Nail on his big toe, which both he, and his servant, had attempted repeatedly to pare ; but in vain : Therefore he sent for his surgeon ; and asked him, if he was able to assist him in this case ? The surgeon attempted to cut the Nail ; but found it impracticable, without giving pain.

HE, however, unwilling to let such an operation baffle his dexterity, told the gentleman, that he would call next day ; which he accordingly did ; and provided himself with a file, and fine saw, for the purpose of taking off the Nail.

SUCH an operation, though not attended with pain, was however so disagreeable, that the gentleman could not bear it. I was then consulted in this case. The gentleman informed me, that he had a Nail, of seven years standing, which both himself and servant had attempted to cut; but to no purpose, as it was so extremely hard and thick. I therefore undertook his case; and performed the operation in the space of ten minutes, without giving pain, which was truly gratifying to him.

ANOTHER case. A noble lady had a remarkably Deformed Nail on her big toe, of eight years standing; during which period, many attempts had been made to cut it. At last she resolved to come to town, to apply to me. I was then immediately consulted, if I could take off that Nail, without danger. I promised to operate with safety, and without giving pain.

THE lady was highly delighted at this information. On seeing her foot, I was astonished

nished at the very singular appearance of her Nail: It was directed upwards, and in the form of a ram's horn. Before attempting to operate, I made a bargain with the lady, that I should be entitled to the Nail, as I judged she might perhaps incline to keep it. I however succeeded in taking off that Nail, in the space of fifteen minutes, without giving pain—which may be seen in Plate II. Fig. VIII.—*a* represents the part where it was cut off, at the point of the toe; *b*, the upper part; *c*, the point; and *d*, the under-part of the Nail.

ANOTHER case. A country gentleman, aged ninety-five years, was troubled with Deformed Nails, who tried every possible method to get them cut; but to no purpose. At last he was advised to come to town, and apply to me, as I was the only person who could assist him with safety. Accordingly, on his arrival, he consulted me; and inquired; if I was capable to cut his Nails, without danger?

ON seeing his feet, I was astonished at the appearance of his thick and long Nails, on some  
of

of the small, as well as big toes. I asked him, how long these Nails had continued so? He told me, that, during a period of twenty years, they had not been pared, though several attempts had been made by his servants, friends, and medical men; but he was incapable of undergoing the operation, as his toes were become remarkably tender.

HE likewise informed me, that, during the last twelve months, the bed-clothes were become troublesome to him. Therefore he was advised to come to town, to apply to me, on whom he relied with confidence.

I THEREFORE undertook this gentleman's case, and operated with the greatest ease. I first cut a Nail from the first small toe, which measured in length two inches, beyond the common portion which grows upon the flesh. See Plate I. Fig. IX.—*a* represents the part where it was cut off; *b*, the upper part; *c*, the point; and *d*, the under-part of the Nail. It may appear extraordinary, how a person could walk with such a long Nail, or what kind

kind of shoe he must have used. That Nail assumed an adunque form, and was directed towards the little toe, the two next toes lying upon it. The thickness of his Nail, in the middle, measured an inch in circumference.

I CUT off another Nail from the third toe, which assumed a different direction, inclining downwards, having the exact appearance of a parrot's beak. See Plate II. Fig. VII. which admits of the same explanation as above. It measured in length an inch and an half, from the common portion which covers the fleshy part: Its thickness was an inch and an half in circumference.

THIS operation was not attended with any pain, as I did not cut off any part, but what was projecting too much from the point of the toe. I asked the gentleman, if he could blame any thing for producing these Nails? and how long they had been so? He could not inform me, what had produced the uncommon size of his Nails; neither could he recollect exactly, how long they had remained in that condition.

condition. I then inquired, if, in his youth, he had received any accident from horses? or if any thing heavy had fallen upon his feet? He informed me, that he had often had his feet bruised by horses.

I SHALL now mention another singular case, of a Deformed Nail. An elderly gentleman applied to me, to assist him, as he had a very painful Nail on his big toe. At first sight, I was somewhat astonished at the appearance of the Nail. Its colour was of a whitish yellow, and was not very thick. From the appearance of it, I was of opinion, that it would not be attended with difficulty: So I took my instrument, and began to operate, when he complained of pain; and said, that he could never bear that Nail to be touched, as it was always painful to him. I however softened it, and proceeded gradually to cut it, with the utmost caution. In cutting, I found it remarkably soft, and similar to chalk. Every portion which I cut off, fell into several pieces: So I continued to make it as thin as possible, which gave very considerable ease to the

the gentleman. I attended for a considerable time, and observed that it was more painful than any Deformed Nail I had ever formerly seen.

I INQUIRED at the gentleman, if he could blame any thing for producing this Nail ? All the information I could derive from him, was, that a stone had fallen upon his foot, and bruised it. These few cases may serve for a specimen, though I could state several hundreds ; but as they are all similar, I will not tire the reader with more. Therefore, from all the inquiry I could make, and the attention I could bestow, in the course of a very extensive practice for many years, I am convinced, that Deformed Nails are always produced by accident.

HAVING had it in contemplation, for many years, to publish a Treatise on this subject, entirely new—therefore, as a Chiro-pedist, I minutely examined the feet of every patient who came under my care ; and, even although I perceived their Nails regular,

I inquired,

I inquired, how they managed them? or if ever any accident had befallen their toes, or Nails? I even was so strict, that I inquired, if any accident had happened to the Nails of their fingers? Some informed me, that, so far as they could recollect, they never had sustained any accidents? Others informed me, that some heavy body had fallen upon their toes; and that the Nail of their big toe was become quite black, which at first was painful, but gradually grew out, and a good Nail succeeded, which had no appearance whatever of having sustained any accident.

OTHERS, again, informed me, that they had received blows upon their Nails with a hammer, which rendered the Nail quite black; yet it grew up in a regular manner, as if no such accident had ever befallen it.

MECHANICS informed me, that they accidentally had cut off, with a sharp instrument, the half of the Nail; yet it grew up again regularly. Again, I was informed by wrights, that splinters have often penetrated below the Nail,

Nail, very near to the beginning, which, with great pain and trouble, was got safely out, but not without much injury to the Nail ; yet it grew up again.

I HAVE often observed, that children have been hurt by means of catching hold of the door, which has been shut before the child removed its hand ; which was so injured, that the Nails have become very black, owing to the coagulum of blood, which proceeds from some of the small vessels having been lacerated. Several accidents happen to children, as windows falling upon their fingers, or the covers of chests, &c. all of which are liable to produce the same phenomenon of the Nails ; yet I never have observed any deformity of the Nails from such accidents.

MILITARY gentlemen have informed me, that they have often been so much fatigued with marching, that when they took off their boots, they perceived their stockings tinged with blood ; and when they drew off their stockings, found the Nails of their big toes in them. Notwithstanding the force that must have occa-

sioned this accident, yet they assured me, that the Nails grew, and became as regular as formerly.

BUT what is still more remarkable, at the same period of the year in which the Nails were forced out, at the very same period of the succeeding years, they dropped out, and new Nails were produced. Whether this phenomenon happens during life, I know not, as I have not had an opportunity to correspond with those gentlemen who gave me the information.

OTHERS have given me the same information, with this difference, which indeed is very remarkable; *viz.* that the Nails, without either pain or feeling, had fallen out regularly at the end of every six months, and yet were produced again. Indeed, I never knew an instance where such Nails did not regularly grow again.

IN my first inquiry concerning Deformed Nails, I was perfectly satisfied, that they were produced by accidents.

FURTHER

FURTHER information and experience, however, taught me, that bruises, sustained by mechanics and children, produced no such deformities. Besides, I have been repeatedly informed, that persons have accidentally pushed their big toe against a hard body, by which the Nail was forced out. So I thought, that there could not be a greater accident than the entire loss of the Nail: Yet these Nails have regularly grown again.

I now felt myself embarrassed with uncertainty concerning the real cause of Deformed Nails; therefore must have recourse to farther observation, which may, perhaps, tend to throw more light on this subject.

I THEN made inquiry at travellers and military men, from whom I could expect most satisfactory information, as they are often obliged to march; as they are most liable to accidents. I inquired at a great many, of the above description, concerning this; and derived such information, that I am no longer in the least doubt concerning the real cause of Deformed Nails.

SOME

SOME of them favoured me with Nails, which were found in their stockings. I inquired, if they observed much blood, from this accident? Some of them informed me, that when they pushed their foot against a stone, it was so very painful, that they thought proper to take off the shoe and stocking, when they observed a considerable quantity of blood. Others informed me, that they had observed no blood; but supposed, that their Nails had come off by the fatigue of marching. From all the information that I could collect, and from an unwearied attention to the symptoms attending Deformed Nails, I am convinced, that they originate, not from an accident happening to the body of the Nail, but from some other cause.

SEVERAL years ago, when I was engaged in writing this Book, the subject of the Nails cost me some trouble: But by proper and candid investigation, I was fortunate enough to discover the Reservoir of the Nails.

BUT from considering Deformed Nails, I was very much puzzled, as I found from experience,

perience, that they were not produced by accidents happening to the body of the Nails. Besides, I was aware, that such a discovery would be expected from the Author of such a Work as this ; which gave me no little uneasiness, as I was very anxious to throw light on this important subject, in order to prevent Deformed Nails, if possible.

*The Regulator of the NAILS.*

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BEFORE I assign the cause of such deformities of the Nails, I must first demonstrate a membrane, which has always been considered insignificant.

IT is a thin insensible membrane, adhering to the beginning of the Nails, and covering a considerable part of the Nails of children; while, on the Nails of people advanced in years, it does not grow so far.

IT is that membrane which anatomists term, Semi-lunar Fold, from the resemblance it bears to a half-moon; but in no other view do they consider it; neither, with them, does it serve any purpose whatever.

BUT, from accurate observation, I have found, that it serves an important purpose with

with regard to our Nails; therefore I denominate it, the Regulator of the Nails: And shall prove in the sequel, that when this membrane is injured, or destroyed, the Nails become deformed; while, in the healthy state, it binds the Nail close to the cutis vera, and at the same time to the cuticle.

ON the contrary, when the Regulator is injured, or destroyed, the Nails continue to grow, as the corpus mucosum furnishes the same nourishment; but, independent of this, when the Regulator is destroyed, the Nails become deformed.

I HAVE stated, in a former part of this Work, that the Nails of the big toe have come out by marching (and have become regular again), owing to the heat and perspiration, which have a tendency to loosen them. Besides, when our feet become hot, they swell; and, consequently, the shoes become too short: Therefore it is not surprising, that, from the great irritation, the Nails, in such circumstances,

circumstances, should be unavoidably forced out; but the Regulator having been left entire, therefore a regular Nail grows again.

HAVING given a short, but accurate account of the causes which force out the Nails, but which leave the Regulator entire; I shall now proceed to state the reason why a Nail becomes deformed, which I shall endeavour to elucidate in as clear a manner as information, and observation, have enabled me.

IT is well known, that I excel in operating upon the Nails; which furnished me with a vast number of cases, of the worst kind. At every patient who came under my care, for such Nails, I inquired into the causes which had produced them: and was uniformly informed, that they were produced either by some heavy body falling upon their toes, or from a horse treading upon them, by which their Nails were so severely bruised, that they were rendered quite black; yet did not come out; but became gradually thicker, and

the blackness disappeared, when the deformity of the Nails took place: Therefore I am thoroughly convinced, that the heavy body, or the treading of the horse, injured the Regulator, by which means the Nails became deformed.

So easily may the Regulator be injured, that I have repeatedly met with cases of Deformed Nails, which were produced, as I was informed, by another person treading upon their toes, while dancing.

I SHALL now state a still more convincing proof of the truth of my observation. There are many people, who have Nails upon their toes, particularly upon their little toes, which do not grow.

SUCH Nails have nearly the same form; but have an appearance different from other Nails: but what is very remarkable, they have sensation.

AGAIN, I have often observed upon the other smaller toes, that half of the Nail grew  
M m regular,

regular, while the other half did not grow at all, owing to the next toe lying upon it ; and, by constant pressure and friction, undoubtedly the Regulator has, on that side, been injured. That part which does not grow, has likewise sensation, as mentioned above.

I SHALL here relate a very singular occurrence. I was employed by a noble lady, to extract Spinæ pedum ; and, as was customary with me, I examined the Nails, both upon the toes and fingers, so that nothing might escape my observation, whether from deformity, or deficiency.

I OBSERVED a Nail, of a very curious appearance, upon her thumb.

I THEN made a polite apology ; and asked the lady, what was the matter with her Nail ?  
“ She informed me, that she could not tell, as  
“ it had remained in that state as long as she  
“ remembered ; and supposed, that she had  
“ brought it to the world with her.”

FROM examination, I perceived that the Regulator was wanting. I then touched the beginning of that Nail, and she complained of pain.

I THEN took the liberty to press upon the end of the Nail, when I could distinctly perceive the beginning projecting up: I therefore was fully convinced, that the Regulator was altogether wanting; therefore it was not surprising to me to be informed, that her Nail did not grow.

IT may now be asked, why these Nails do not grow? The answer is obvious: As they have removed from their natural situation, and lost the Regulator; therefore they do not coincide with the Reservoir, and consequently cannot grow.

I DEEM it unnecessary to state any more proofs, or cases, as all the information that I could collect, tended uniformly to establish the truth of my observations.

I HAVE

I HAVE clearly shewn, that when Nails came out, and grew again, it was owing to the constant friction and irritation during marching: By this I was fully convinced, that the Regulator was not injured.

BUT, on the contrary, I have proved, that when a Deformed Nail was produced, it was owing to a heavy body falling upon it, or to the treading of a horse, by which the Nail became black, and grew out, and assumed a deformed shape.

I AM then, from the above observations, perfectly convinced, that an injury done to the Regulator, never fails to produce a Deformed Nail.

THEREFORE I may be considered, not only the discoverer of the Reservoir of the Nails, but likewise of the Regulator of the Nails.

# MANAGEMENT

OF THE

## NAILS UPON THE TOES.

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HAVING fully demonstrated the nature, texture, and progress of the Nails, I shall now give directions for their proper management; which particularly merits attention, both because they, in the First Order, are extremely liable to injuries, and are too often mismanaged. All that is commonly done in this stage, is, when we go to bed, or rise up, to examine our Nails; and when we observe some of them rather too long, we seldom take the trouble to call for a penknife, or scissiors, but, with our fingers, tear off a portion

tion of them. This operation generally proves successful ; but I have seen instances of bad consequences originating from such practices. Indeed, every person will find this by himself, when on tearing off the Nail, and it does not go according to his wish, but goes deeper, he immediately desists from proceeding, contenting himself with hopes, that the Nail will grow up again, when he will accomplish his end.

I AM convinced, that such practice has repeatedly succeeded : but I have seen the toe fwell and inflame from such practices ; so that the patient was obliged to call for medical assistance. I have particularly seen the baneful effects of such a practice, on a gentleman with whom I was acquainted. He, on going to bed, observed one of his big-toe Nails too long. As customary, with his finger, he attempted to tear off part of his Nail ; but unluckily it did not succeed, and went too deep into the quick : he therefore desisted.

IN the morning he rose up, and going hastily to his drawers, to get some clothes, the splinter of the Nail caught hold of the carpet, which tore it near to the beginning, and produced severe inflammation ; so that the gentleman was laid up for a considerable time, and the assistance of a medical man was required. Therefore every person should be cautious, and guard against such practices ; particularly with the big toe, which is most liable to grow into the quick, in the First Order, when our Nails are thinnest.

WHEN we come to the Second Order, our Nails are thicker and harder, so that we cannot tear them off so readily as in the First Order. Suppose we have pared them too short, and rounded their corners too much, we are not to expect great danger ; because nature has furnished us, in the Second Order, with a substance, which I term *Unguis Spongiosus*, which is placed in such a manner, under the edge of the Nails of the big toes, as if it were mechanically fixed, for the purpose of securing these Nails from the danger of growing

growing into the quick. But, in the First Order, nature has not furnished us with this substance.

I SHALL therefore give exact directions for Nails of the First Order: particularly, of the Nails of the big toes; which are most liable to danger, and more subject to grow into the quick than the Nails of the smaller toes: The reason of which is obvious; because the big toes are longest and thickest, consequently they sustain most pressure upon the Nails, from the shoes.

THE big toe has commonly a straight direction. In some persons, however, the point inclines a little upwards, while, on the contrary, the points of the smaller toes incline somewhat downwards. Therefore it is evident, that the Nails of the big toes sustain considerable more pressure from the shoes, than the Nails of the smaller toes do.

LET us then consider the consequences which may happen, from paring the Nails of the

the big toes too short, and rounding their corners too much. The pressure is evident; by which the integuments come above the corners of the Nails: so they are daily pressed more downward, and the corners are interrupted by the surrounding parts, so that they cannot come out with such facility. They therefore continue to grow, but are interrupted; and consequently grow into the integuments.

IF the Nail hath perforated the skin, a patient then begins to feel pain; which however, at first, is only trifling, but gradually increases, as the Nail grows deeper. This induces him to attempt a remedy; *viz.* to pare his Nail very short: but he cannot properly round the corners any more. Should he, however, gain his object, by taking a small portion from the corners, he has done more harm than if he had not touched them. But he supposes, that it would be a great relief to him, for the shoe would not press so hard upon the end of the Nail as before: But he does not know, that the fleshy part projects over the edge, at the end of the Nail,

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and interrupts the natural growth of it: therefore the Nail is forced to assume a reverse direction; that is, instead of growing forwards, it grows inward, sometimes taking its course to one side only, sometimes at both sides. When the Nail has penetrated so deep, and several attempts have in vain been made to pare it, then it has been the practice, to scrape the surface of the Nail very much, so that it becomes quite thin, supposing, by these means, that the corners would grow out. When a person has thus considerably thinned the Nail, he has not gained his point, as the corners retain their position; and by thinning the upper surface of the Nail, he only renders it more liable to sink in.

WITH this practice I would readily agree, if there was a possibility of making the Nail shrink, which could only be done by a hot iron, applied to the Nail, in the same manner as mechanics do to a horn, which readily causes it to shrink; but this is impracticable. Therefore a patient, thus afflicted, should never attempt to thin the Nail. Nay, in  
the

the First Order, Nails should never be thinned, as they are naturally thin enough; neither ought they to be rounded at all, nor shorter than the point of the toe. The Nail should always be cut square, and the corners remain out of the fleshy part; and the bad habit of tearing off the Nails, should be carefully avoided. For the operation of Nails grown into the quick, see the head of Operations.

THE Nails of the smaller toes, are not so liable to grow into the quick as those of the big toe; but they should be properly managed. They must be cut square, and the corners should remain out, in the same manner as those of the big toe.

SUPPOSE they incline to grow in, it is impossible that they can penetrate, because they constantly follow their natural course, and grow forward.

IF people attend to these directions, they will never incur the danger of having Nails grown into the quick.

NAILS of the Second Order, are more easily managed, and less liable to danger, than Nails of the First Order, unless from accident. They should, however, be pared at least every month, as they do not grow so readily as those of the First Order. These people who have the *Unguis Spongiosus* below the Nails, may cut them either round, or square: They will not be in any danger of growing into the quick, because it serves as a guide, growing along with the Nail. But great care must be taken, not to destroy this substance.

IN some people, however, this substance grows so rapidly, that it becomes troublesome to them, so that they are obliged to diminish it in the best manner they can. If they, however, should destroy it entirely, they would be in danger of having the Nails of their big toes grown into the quick. Therefore, every person should take care to leave a portion of this *Unguis Spongiosus*. In fine, it is the best and safest method to cut the Nails square, so that the corners project a little longer than the point of the toe. There is no doubt, but that a long

a long Nail is destructive to the stockings, but it is a safeguard to the toes. The smaller toes should be managed in the same manner as the big toes: Though they are not so liable to grow into the quick as the latter, yet they are as liable to accidents.

THE Regulator should be particularly attended to, in Nails of the First and Second Order, as it adheres very closely to them, especially to the Nails of the big toes. While the Nails continue to grow, they drag along with them the Regulator, which is not easily disengaged; by which means, it often occasions inflammation of the integuments, at the beginning of the Nail: Therefore a person, when paring his Nails, should always loosen the Regulator from the Nail with a blunt-pointed instrument.

I HAVE very often been consulted by patients, who complained of pain at the beginning of the Nail. Upon examination, I found that the inflammation was occasioned by the  
Regulator

Regulator adhering closely to the Nail, which continued its growth, and dragged along with it the Regulator, which rendered the integuments tense, and consequently produced the uneasy sensation. I therefore took my instrument, and loosened the Regulator ; and when it was too long, I pared a little from it, without touching the integuments.

I WAS frequently asked, if that was all that was necessary ? because they expected instant relief, as if it was a Spina pedum. I answered them, that it required no other treatment ; but that they might depend upon being relieved next day. I directed my patients to adopt this method, and they never would be troubled again with this complaint. I have afterwards seen several of my patients who laboured under this complaint, and have received thanks, for directing them to adopt this method. Great care must be taken, not to go too deep, to hurt the Regulator of the Nail, as such a neglect will be apt to bring on a Deformed Nail.

THE attention requisite for the proper treatment of Deformed Nails, is but small, as they grow much slower than those of the preceding Orders; as they require to be pared only every six months, nay, often, only every twelve months. The sole difficulty attending them, is, that they grow so thick, and become so remarkably hard, that a person is not capable to pare them; at least, it is attended with great difficulty. See Operations.

MANAGEMENT  
OF THE  
NAILS UPON THE FINGERS.

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HAVING stated at full length, the management of the Nails of our toes, I shall now offer a few remarks upon the Nails of our fingers; though I have not paid very minute attention to this branch, because they are not so liable to accidents as the Nails of the toes. The prevailing custom of wearing the Nails long, produces sometimes accidents, as they are apt to collect some filthy substance below the projecting part; so people are obliged to use pointed instruments, for the purpose of removing this, by which means they often go

too

too deep, and loosen the Nail from the cutis, of which I have seen many instances.

A LADY, who had the custom of wearing her Nails very long, which rendered them more liable to collect filth than they otherwise would have done, was obliged daily to remove this substance, by means of instruments which ladies have commonly at hand; *viz.* either by the scissors, or by means of a pin. This filthy substance is often so closely attached to the Nail, that they are obliged to use a little force in order to clear it away, without any consideration; their sole object being to keep their Nails very clean.

THEREFORE, the frequent repetition of these practices, loosens the Nails from the skin. At first, people are apt to overlook the looseness of the Nail; therefore, how much more loose the Nail becomes, so much more the filth is collected, and advances nearer the beginning of the Nail. At last, however, this lady was somewhat astonished, to find that one of her Nails had become more loose than

the rest. She continued, however, her usual practice, which tended still more to loosen the Nail.

I, AT last, was consulted by her; and when I looked at her Nail, I inquired, if she could assign any reason for the looseness of it, as I observed the other Nails in a regular state? She informed me, that she never had any accident; neither could she give any reason for bringing on this Nail. I then asked, if she was in the habit of working away that substance which is collected under the Nails? She told me, that she was obliged to do so every first or second day, or it would appear exceedingly disagreeable. I therefore informed her, that she wore her Nails by far too long; and that she had, by the use of pointed instruments, loosened the skin below that Nail. She asked me, if I could be of any service to her? I said, that I would endeavour to make her Nail grow as regular as the other Nails. She was very happy at such information, as she was fond of neat uniform Nails.

I THERE-

I THEREFORE pared that Nail, so far as it was loose. She was, however, somewhat alarmed at my cutting away so large a portion from it; but I assured her, that she need not be afraid, as that Nail would grow again in its natural position. I then ordered her water, to wash her fingers clean, as, below that Nail, there was some hard crusty substance.

I THEN desired her, to keep that denuded part quite clean, and to pare off the smallest projecting part of that Nail, and to wear her other Nails shorter. Besides, I advised her, to pare them every ten days, which would prevent her former practice, and secure her Nails from similar accidents. The lady attended particularly to my directions; and in less than three months, that loose Nail was equal to the other Nails.

I SHALL relate another remarkable case, which occurred in my practice. A gentleman who was in the habit of wearing his Nails too long, had one of them split near

to

to the Regulator, which, at first, he did not attend to ; but it became exceedingly troublesome, as the ragged corners catched hold of every substance which came in the way. The gentleman assisted himself, by paring off the corners. Still, however, the split continued ; and as the Nail grew out, the split still bursted again. In this practice, he continued for a considerable time.

AT last, however, I was consulted about this Nail ; and he asked, if I could make it grow regular as before ? I said, that I would do my endeavour to render his Nail as regular as formerly. He was very happy at my promise, as he had experienced considerable inconvenience from it. I therefore proceeded, and pared the projecting parts very close ; and, at the same time, pared the split part as close as possible : and likewise directed him, to pare the Nail every fourth or fifth day, in the same manner, in order to prevent it from catching hold of any substance ; and that I should attend to the Nail every fortnight : and ordered him, to wear a case, either of leather, or silk,

to

to prevent the Nail from injury. I repeated my treatment every fortnight ; and, in the course of three or four months, effected a cure. But where the split was, there appears an edge upon the Nail, which will remain during life.

THEREFORE, every person should pare his Nails every ten days ; by which means, he will not have occasion to use pointed instruments, for removing that substance which is collected below the Nails.

IN paring the Nails upon the fingers, we must attend to rules different from those prescribed for the Nails of the toes. They should be completely rounded, as the corners would be ready to take hold of certain substances, which would prove injurious to the Nails. I suppose it will be needless for me, to decry the bad habit which many people have, of biting their Nails, which not only seems unnatural, but the Nails themselves assume a ragged form ; yet I never have observed any bad consequences produced by this habit.

THERE

THERE is still another troublesome complaint about the Regulator of our Nails, to which young people are most subject; that is, ragged pieces of skin adhering to the integuments, which, when attempted to be tore off, produce very pungent pain. Some people are, however, more distressed with it than others. Various methods are adopted for eradicating these ragged pieces. Some attempt to bite them: some take the scissors, and clip them off: others take their Nails, and try to tear them off, supposing, by this last method, that they would eradicate the complaint entirely; but this is a very rash and improper practice, for I have seen many instances of inflammation produced by it. I have often been consulted concerning the cause of this complaint; which is obvious, as the Nails, in young people, grow quicker than in elderly people, and the Regulator adheres closer to them, and at the same time to the cuticle: so, by this means, the cuticle is stretched, and frequently a part of it separates itself, and is contracted upwards, remaining in form of ragged pieces of skin, often

often producing inflammation and swelling of the part.

THE cure, and prevention, of such a complaint is perfectly simple. Wherever I was consulted in a case of this kind, I directed them to loosen the Regulator from the Nail, by means of a blunt-pointed instrument. It sometimes adheres so closely to the Nail, that such an instrument does not suit the purpose: Therefore recourse must be had to a sharp-pointed penknife; and, with a steady hand, the Regulator must be loosened from the Nail.

WHEN the Regulator is too long, and appears ragged, it should be cut off by the penknife, near to the fleshy part. After it is thus loosened, it should be pushed backwards with the blunt edge of the knife. Great care, however, is necessary, in loosening the Regulator with a penknife, lest we go too deep, and thereby injure it. If this should happen, we would incur the danger of bringing on a Deformed Nail, of which I have seen several examples.

A YOUNG

A YOUNG lady consulted me, about a Deformed Nail upon one of her fingers. When I saw it, I inquired, if she could blame any thing for bringing on this deformity? She told me, that she could blame nothing. I then asked her, if she had sustained a bruise, of any kind, upon her Nail? She informed me, that she never had met with any accident whatever upon that Nail, so far as she could recollect.

I THEN inquired, if she had been in the habit of loosening too much the Regulator? She said, that she had. I then asked her, how she managed it? She told me, that she used a needle, or pin, and always loosened the Regulator too much. Therefore I was fully convinced, that she had injured the Regulator of the Nail.

I TOLD the lady, that I could be of no farther service to her, than to render the Nail thinner; and assured her, that if I did so, the Nail would grow thicker than it is now: therefore

therefore advised her, not to thin it, but to let it remain in the same state.

I SHALL relate another case only. I was consulted by a young lady, concerning the state of her Nails.

WHEN I saw her fingers, I perceived a curious appearance of her Nails, which were extremely unequal.

SHE was in great distress concerning this; and asked me, if I could be of any service to them?

I INFORMED her, that I would do all in my power.

I ASKED, if she could assign any cause for their irregularity? She said, she could not, except that she was troubled with these ragged pieces of skin, which fly off from the Regulator; in consequence of which, she had used various methods, but without effect: so she

was advised, to loosen the dead skin lying upon the Nail.

I THEN asked her, how she performed the operation? She told me, that, with the point of the scissors, she loosened the skin from the Nail, as far as she could.

I THEN asked her, if she could manage it easily with the scissors? She said, that she had to use very considerable force to remove it from the Nails, as it adhered so very close to them.

I THEN examined her Nails, and found the Regulator entire. I therefore was convinced, that, by the great pressure, she had forced down the Nails at the beginning, where they are most tender: So, from pressure, the hollows were produced, which remained unaltered, and accordingly became unequal.

I DESIRED her, for the future, to use a sharp penknife, and to loosen the Regulator slightly from the Nail; and cautioned her against injuring

juring it, lest she should bring on Deformed Nails. Since that time, she has attended to my directions ; and her Nails have become regular, according to her wishes.

I HAVE had a variety of such cases ; but as they are similar, I thought these sufficient for a specimen. Therefore, all who attend to the above directions, will never be subject to this disagreeable complaint, and will never fail to have regular Nails.

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## APPLICATIONS

FOR

## S P I N Æ P E D U M.

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I SHALL take into consideration the various medicines, which have been employed as cures for Spinæ pedum.

I SHALL only consider those which have been most famous in their times. The following were esteemed most effectual remedies.

R. Gum. Ammon. dissolved in vinegar, and inspissated, ʒij;  
Vitriol of Venice, ʒfs.

But

But some use

Cyprian or Roman Vitriol (which they call the Blue Stone)—of which they take ʒiſſ; White Precipitate, well edulcorated, ʒiij; Strasburgh Turpentine, a little, or Q. S.

Mix, and make a wax-cloth.

*Another.*

R. Galbanum prepared with vinegar, and Wax,  $\overline{aa}$ , ʒvij; Turpentine, ʒv.

Mix them, and make a plaster.

*Another.*

R. Pix. naval. ʒi; G. Galbanum in acet. vinſolut. ʒiſſ; Sal. Ammoniac. ʒi; Emplaſtr. Diachyl. composit. ʒiſſ.

Omn̄e bene malaxentur, et secundum artem misceantur.

*Another.*

R. Antimon. crud. pulverisat. ʒiſſ; Mercur. dulc. drachm. ij; Sublimat. corrosiv. gr. vi.

Mix, and make a plaster.

*Another.*

*Another.*

R. Cerussæ in aqua rosar. lotæ vel humifactæ,  
 Lythargyr. in aqua flor. lilior.  
 Convall. trit. et bene mist.  
 Minii in aqua solani purgati, aa, ʒij;  
 Olei rosarum per infusionem parati, ʒxiij;  
 Ceræ flavæ, libj.

Mix, and make a plaster.

R. Take of Galbanum dissolved in vinegar, G. Ammoniac, of each an ounce; Diachyl. half an ounce, or common plaster: let them be melted together, and then mix with them, Verdigrise powdered, ʒi; and make them into a plaster.

BESIDES these, there are a variety of others which have been recommended, as ivy-leaves soaked in vinegar, house-leek or fows, Burgundy pitch. Independent of these, there are a great number of quack-medicines, as Arabian, Russian, German, and Kennedy's Corn plasters; besides, oils, and a variety of ointments: Likewise, roasted onions, garlic, raw beef, &c. &c. I have been at great pains to try the merits of all these, which to relate, would, to the reader, prove tedious. I found,

found, that they all served the same purpose, as they are all somewhat corrosive, or dis-cutient. Nay, I have been told, that several, by applying a wafer, have been cured. I shall now state the receipt which I have found the most effectual and simple, and which I have always used in my practice; *viz.*

R. TAKE of yellow resin, three ounces; yellow wax, an ounce and half; sheep's suet, an ounce and half; powdered verdigrise, half an ounce. Melt and mix according to art.

LET us now take into consideration the effects of these different applications. From every medicine, whether announced by quacks, or recommended by regular practitioners, the anxious patient undoubtedly expects relief. If this were not the case, he would neither be at the expence of purchasing the medicine, nor at the pains of operating according to the directions.

SURELY, every person, who does attend to the directions, and promises, as contained in advertisements,

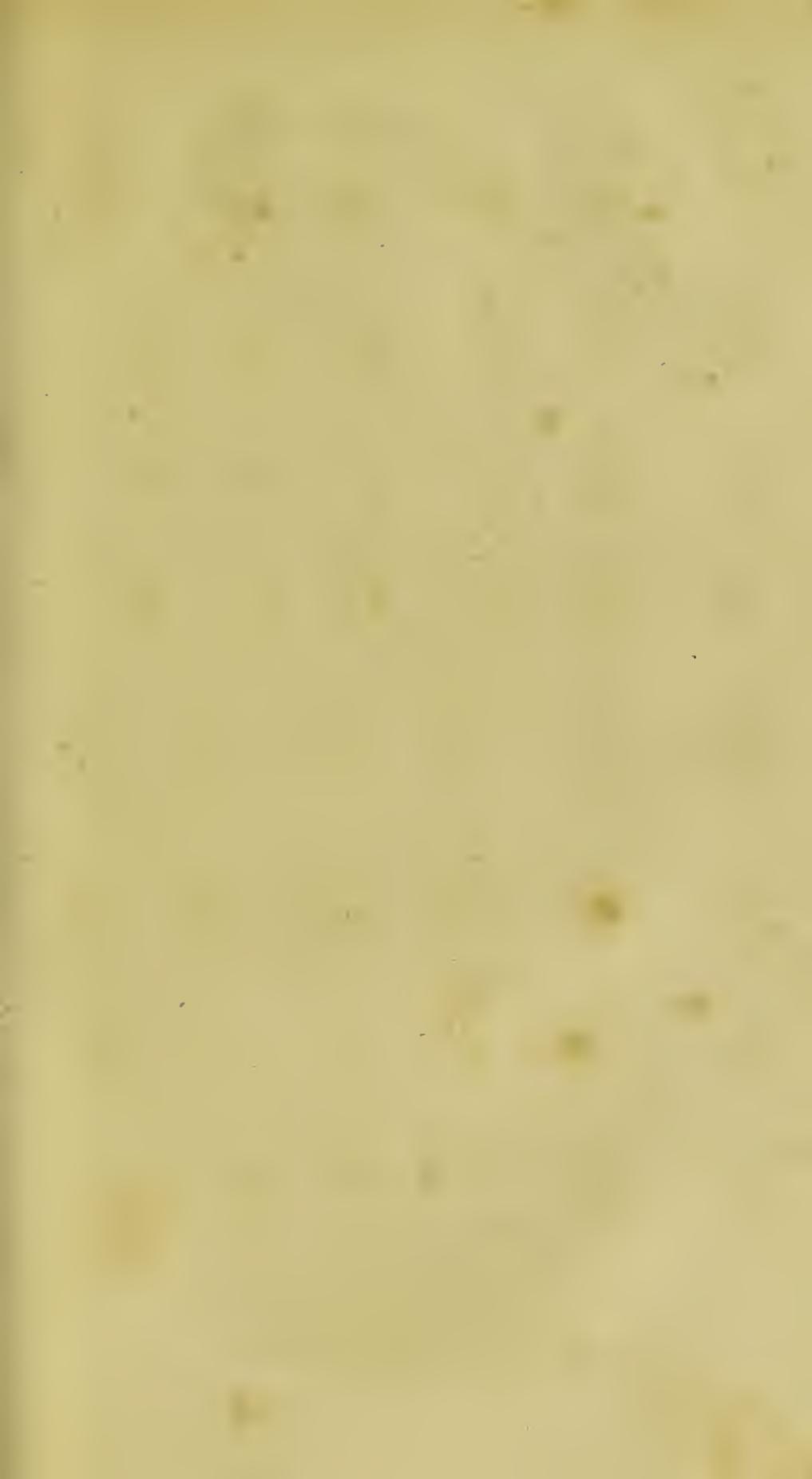
advertisements, or hand-bills, undoubtedly expects a radical cure.

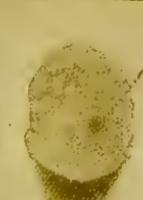
BUT let us for a moment consider, in what manner these medicines must act, in order to effect this. All of them, then, must either possess a corrosive or discutient principle.

AFTER a man has acquired some respectability in this branch, would it not be a folly, that he should pretend to possess a specific remedy for the cure of every Spina, and to boast of it?

Is it not a want of reflection to imagine, that this very specific should act with similar powers upon all constitutions, and each species of these excrescences, however diversified they may be in their nature?

SUCH a pretender must never have observed the origin, the increase and decrease, and extirpation of Spinæ; otherwise he could not remain of this opinion.





E II



Spinae of Children not Exceeding 4 years old

E III



Concealed Spinae

E IV



Internal

E V



E VI



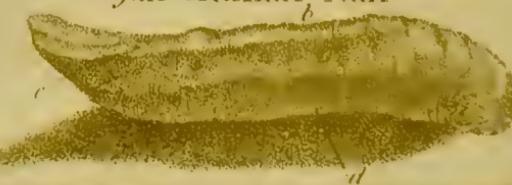
E VII



E VIII



Fig. IX Human Nail



IN the beginning of my practice, I was of the same opinion, till, from further observation and experience, I was led to investigate the subject more fully, by which I have discovered different species, as mentioned in a former part of this Work. Some of these requiring different medicines and treatment—

WE shall now attend to each species separately, beginning with a *Spina pedum hereditaria*. See Plate I. Fig. I. and II. It appears to be merely a hard excrescence. We judge, from its appearance, that we, by medicines, of corrosive or discutient powers, might eradicate it.

BUT see Fig. V. and VI. which represent the internal side of the same *Spina*. Suppose, then, that a medicine has the power of corroding this excrescence, how is it possible that it should penetrate to the very bottom of the root, and not at the same time destroy the sound part, as the roots are sometimes very deep, and sometimes two or more roots belong to the same *Spina*? For this, see Fig. V. *c, d,*

Qq

which

which has two very deep-seated roots; and the following Fig. *e, f, g*, have not only deep-seated, but very broad roots.

FROM a slight view, a person may be led to imagine, that a medicine, very corrosive, might be so applied, as to destroy the excrecence: But this supposition alone proceeds from ignorance, as is evident from the bulb, or root, which lies much deeper than the circumscribed callous part; nay, in general, it penetrates below the integuments.

BESIDES, it is impossible that any specific whatever can be applied, which has the power of acting upon a Spina with two roots, which will, at the same time, leave the surrounding parts entire.

TO render my observation still more evident; see Fig. IV. which represents that Concealed Spina, seated at the outer side of the little toe.

FOR a description of which, see Concealed Spinæ upon the little toe. The situation of this

this Spina is such, that no evident mark of it is to be observed, farther than a small speck, without any callosity whatever: Yet all the advertisements hold forth an infallible cure to the Public, assuming this, without any knowledge either of the nature or species of Spinæ.

To establish the truth of my doctrine more fully, I beg leave to make a digression in this place.

I SHALL therefore mention a few remarkable cases.

A GENTLEMAN, having been troubled for a considerable time with a very painful Spina, was often advised to consult me, with which he at last complied; and accordingly called at my house, when I extracted his Spina. Some time after, it grew again, at which he was very much displeased; and made a rash experiment, by pouring, from time to time, a few drops of aquafortis upon it. In a short time, his toe inflamed very much, and became exceedingly painful, which induced him to

to apply poultices, which, however, did not allay the pain.

HE then sent for a surgeon, who, upon seeing the foot, inquired, how this had taken place? The patient related the circumstance to him; and the surgeon dressed his toe accordingly. At the surgeon's next visit, he found the toe was no better. He then advised the patient to apply to me; but the patient informed him, that I had extracted his Spina formerly, and some time after it grew again.

THE surgeon insisted that he should send for me, as he was convinced that the Spina was still in; and assured him, that I was the only man who could assist him.

I WAS accordingly sent for; and when I saw his toe, found it very much inflamed and swelled, and the surrounding parts very much corroded, while the Spina remained entire.

I ACCORDINGLY began my operation, and extracted as much of that Spina as I could, at this

this visit: So I attended him during a period of six weeks, before he was cured. Six months after this, I met the gentleman, who informed me, that his Spina was grown again.

ANOTHER case. A workman came to my house, complaining very much of a painful Spina. When he took off his shoe and stocking, I observed that he had a Spina projecta, as he had a plaster upon that joint, about the size of a half-crown. He took off the plaster, when instantly the blood flowed from it. I said, Why do you not go to a surgeon, as you have not a Spina? He answered me, that indeed he had, which he pared repeatedly with a razor; but it still grew again: So he was advised to apply a plaster of Burgundy pitch, which he had kept at it for some time: At the same time, informed me, that every time he removed the plaster, the blood flowed.

HE then was advised by his friends to apply to me, as I was the only man who could cure him. I then washed the part, in order to stop the blood, when I observed the surrounding

ing parts corroded, and the Spina standing entire: So I extracted the Spina, and cured him in the space of eight days.

ANOTHER case. A lady consulted me about three Spinæ which she had; and was very much afraid of the pain of my operation. I promised, that I would extract them without pain; which I did. Unfortunately for the lady, one of them grew again.

I THEREFORE was consulted again; and the lady told me, that she was not pleased with my first operation, as one of them had grown again.

SHE therefore ventured upon a second operation, anxiously expecting that I would, at this time, complete a cure, as in the two former: But if I did not succeed, she said, she never would employ me again. I never regarded much, either flattery or threatening; but always did my utmost, to extract Spinæ as completely as I could with safety.

BUT,

BUT, however, the Spina grew again, which induced the lady to apply to medicines, which were published for the purpose ; but all in vain.

THERE, however, appeared an advertisement in the news-papers, stating, that ivy-leaves, steeped in vinegar, was an infallible cure for Spinæ.

THE lady was highly delighted with this remedy ; and accordingly made the experiment, and continued it for a considerable time, which however proved unsuccessful, as her toe became worse and worse.

HER friends then advised her to send for me, which the lady did not relish. But I had a message from her ; and accordingly went.

WHEN I observed the toe, I was unwilling to operate, because it had a somewhat disagreeable appearance. She, and her friends, insisted that I should proceed ; which I accordingly

cordingly did ; and extracted the Spina, which I found larger, and deeper, than I had seen it before.

A FEW days after, I visited the lady, when I found her well ; and received many thanks from both her and her friends. She assured me, that she would never again be imposed upon by medicines, as there was nothing so safe and easy as extraction.

ANOTHER case. A lady, who was troubled with Spinæ upon her feet, was in the habit of managing them. She, however, was often recommended to me ; but as she was pretty expert in assisting her Spinæ, did not much concern herself about employing an operator. But, however, an infallible cure for Spinæ appeared in the news-papers. There is no doubt but every person would instantly purchase this valuable remedy, which promised a cure for such a troublesome complaint. Accordingly, this lady sent for it immediately, and applied it according to the directions.

I now-

I, HOWEVER, was in that family frequently, for extracting Spinæ: But this lady had such confidence in that medicine, that she doubted not of obtaining a cure. I was sent for, to attend some of the family, when this lady appeared, along with the gentleman, from whom I was to extract Spinæ.

AFTER completing the operation, the lady observed, that I received a guinea for what I had done to the gentleman. She, in a smiling manner, said, that she had bought an infallible remedy for the sum of thirteen-pence half-penny, duty included, which would cure all her Spinæ.

THE gentleman observed, that as the medicine was so cheap, it was not likely that it would be possessed of such virtues.

THE lady insisted upon the efficacy of it, as the proprietor had promised, that, if it failed, he would take back the plaster, and return the money.

THE gentleman then asked, who the proprietor was? She did not know; but took the trouble to bring the plaster, along with the hand-bill. When the gentleman read the directions, he observed, The German Corn Plaster, an infallible Cure for Corns; and the proprietor mentioning, That if it did not cure them, he would take it back, and return the money.

THE gentleman, however, was surprised, when he could not observe the proprietor's name.

HE then frustrated the lady's expectations, by observing, that her money was forfeited, as it was scarcely possible that any person would purchase it without trying its effects; consequently, if it was opened, it could not be gracefully returned.

A CONSIDERABLE time after this, a lady consulted me, to extract some Spinæ. She asked me, if I recollect her? I answered in the negative; as I had so many different ladies

to attend, which prevented me from knowing her. She then mentioned, that she had used the German Corn Plaster during a period of eighteen months; and if I could recollect a time when I was operating upon a gentleman, when she boasted of the cheapness of her infallible cure, at which the gentleman laughed?

I THEN was brought to a recollection of the lady; who mentioned, that she had spent more money in purchasing that medicine, than my fee would have cost her.

SO I accordingly extracted her Spinæ. I then mentioned, that I had done more in the space of a quarter of an hour, than her infallible remedy did in eighteen months.

THE lady said, that she would never again place confidence in applications, as there was nothing equal to the operation.

INDEED, I myself have offered a plaster to the public. I, however, was many years in practice

practice before I offered any medicine for the cure of Spinæ. But, from year to year, there appeared new discoverers, who promised infallible cures: So I was advised, by some friends, to publish a medicine, as I certainly had a superior right, from my practice in this line.

I THEREFORE, after some consideration, thought that I was entitled to stand in my own defence; but never pronounced it infallible.

THOUGH I was convinced, that it was more effectual than any ever before offered for the purpose, I was, at the same time, confident, that hitherto there never was a medicine which was calculated to cure every species of Spinæ.

DR. TURNER informs us, of the opinion of Sydenham, the British Hippocrates, who says, That if somebody would exert himself, for the whole of his lifetime, to discover a specific remedy against Spinæ, such a person would deserve



Fig. I



Fig. II



Fig. III



## Internal



Fig. VI



Fig. VII



## Human Nails



deserve well of posterity, and acquire great reputation ; for he would render essential services to mankind. I may say with confidence, that there never was a man in Europe, who has had such an extensive practice in this line, and has made more experiments than I have ; yet I, to this day, have not found a cure for *Spinæ pedum hereditariæ*, by medicine.

I DO not say, that there never was a *Spina* cured by medicine. I am certain, that a great many have been cured : But of what species were they ? No person has been at the trouble, before me, to mark the different species. *Spinæ pressæ* may be easily cured by medicines, because their roots are entirely different from *Spinæ pedum hereditariæ*. See Plate II. Fig. IV. V. VI. which represent the internal part of this species.

IT will be observed, that their roots take various directions ; as some of them have their roots in form of a half-moon ; others, altogether circumscribed ; and some, a little deeper than

than others, but seldom so deep as a Spina pedum hereditaria: Therefore this species may be cured by medicine; as the directions teach, first, to bathe the feet, then pare the Spinæ as close as possible, and to apply the plaster according to these directions. They often pare away almost all the callosity; and when the medicine is applied, it has the power of corroding what remains.

IN this way, many medicines have gained the reputation for every Spinæ, while the cure was more to be attributed to the operation of paring.

A MAN, indeed, must be possessed of a very high degree of ostentation, if he wish to persuade the Public, of the possibility of a complete eradication of all the different species of Spinæ. Good fortune, accompanied with boldness, may procure reputation to a man, who has made some hazardous attempts, by which he may gain credit.

I MYSELF have described the true nature, and pointed out the different species of Spinæ; and

and have shewn with confidence, what may be done in the cure of them.

BUT every one may judge for himself, that the cure, for some species of them, must be extremely different, and frequently changed, according to circumstances, since the nature of Spinæ is also different ; so that they may terminate in various ways.

EVERY thing that could be done, I undertook ; and did every thing in my power, with safety : yet never promised with certainty, that a cure, by medicine, would succeed.

I HAVE been pretty full in exposing the alleged virtues and effects of various applications, which I have endeavoured to delineate by a selection of cases. Many more I could have adduced : but am of opinion, that they will serve for a specimen, and fully tend to establish the truth of my observations ; viz. That there is no remedy yet known, in all the Materia Medica, which will prove a cure for Spinæ in general.

I HAVE

I HAVE no doubt but a person may sometimes obtain a palliative cure by medicine, and sometimes not ; as I have frequently observed, that several have been under the necessity of removing the plaster, which, from its drawing principle, gave them more pain than before it was applied.

BESIDES, it is well known, that there are different constitutions : So it is evident, that one constitution will agree with a medicine, while another will not.

I HAVE observed, after extracting a Spina, when I commonly apply my plaster, that my patients complained very much of pain ; therefore were induced to send for me again ; when I found the toe inflamed, which was occasioned by the plaster. I removed it ; and applied a more powerful plaster, from which they became quite easy.

I, to satisfy myself, tried the medicine repeatedly upon the same person, and found the effect always the same ; while, on the contrary,

trary, by far the greater number of my patients were the better of my plaster.

FROM the above considerations, we learn the inefficacy of applications in general; and have experienced, how inert even these plasters are, which have been introduced into the world with the bold appellation of Specifics: Hence we may, independent of all that has yet been ascertained concerning the powers of medicine, adopt the language of Sydenham; as there has never been a remedy on which we can depend, equal to that which immediately follows in this Work, *viz.* Extraction of Spinæ by Operation.

S f

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OPERATION  
OF  
SPINÆ PEDUM.

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HAVING stated the effects of medicine, which we have found both troublesome and ineffectual, shall now proceed to the only remedy, which I have found the most effectual, easy, and least troublesome to patients; *viz.* Extraction.

THIS operation completely supersedes every application; which may be accomplished in the space of five minutes.

BEFORE I proceed to the Operation, shall demonstrate the Instruments which I have found



Fig. 1.

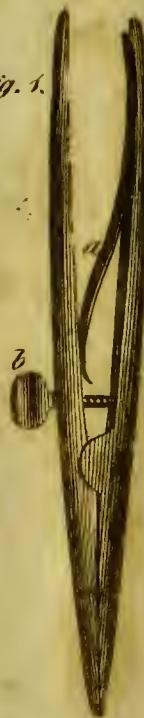


Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



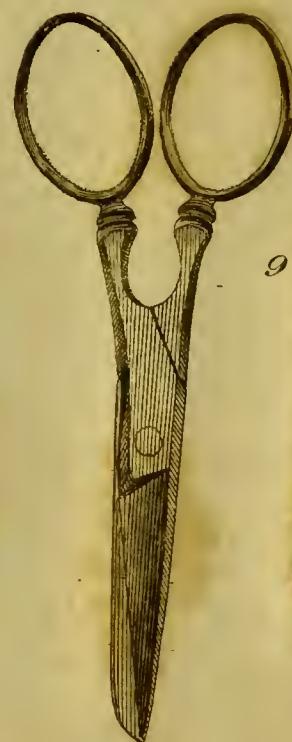
6.



7.



8.



9.



10.



11.



found the most useful, of any, for the purpose. See Plate III. Fig. 2. 3. 4. which are the same instruments, being only different in size ; the utility of which I shall point out. The cutting edges of these instruments are two-fold.

THE upper part of them, is a thick edge, while the under part is quite flat. The reason of which is, that, if constructed in the manner of a lancet, with both sides flat, the cutler, or operator, when setting them, would undoubtedly do it in the finest manner.

THE operator might suppose, that he would perform the operation in a more easy manner. If, however, the instruments were so constructed, two great dangers would be incurred.

FIRST, If so fine, it would be merely impossible to extract a deep-seated Spina without bringing blood ; which, though not dangerous, is yet disagreeable to the patient, and much more

more so to the operator, as it prevents him from seeing what he is doing.

SECONDLY, If the point were so thin, it would always be in danger of breaking, especially in a deep-seated Spina.

IF such an accident should happen, it would prove exceedingly disagreeable to both parties ; for, when the Spina was extracted, and the point left in, the patient would naturally inquire, what the operator was doing ?

SURELY, he could easily persuade the patient, that it was a small piece of the root still remaining : but if there was any blood, it would prevent him from seeing it ; and consequently must remain, and prove productive of bad consequences.

BESIDES, the operator is sometimes obliged to turn the rounded, at other times the flat sides to the patient's toe. Likewise, the two sides answer for two instruments, which are exceedingly convenient : Therefore I have found

found this instrument the most useful of any ever invented.

FIG. 5. is the handle, which is ivory; the socket, into which the instruments are screwed, being steel. The handle is eight-square; and when the instruments are fixed into the handle, it is of an uniform thickness: The instruments are likewise eight-square: The reason of which is, that the operation requires to be performed with remarkable nicety.

THEREFORE, if the handle and instruments were round, they would turn in the operator's fingers: Whereas, in their present shape, they admit of a steady hold; and are accordingly prevented from turning.

FIG. 6. is a knife, having its cutting edge in a straight line: Fig. 7. is the same knife, having its cutting edge rounded, in a contrary direction: Each of them having a blunt part close to the handle, about half an inch in length; the utility of which I shall afterwards explain.

FIG.

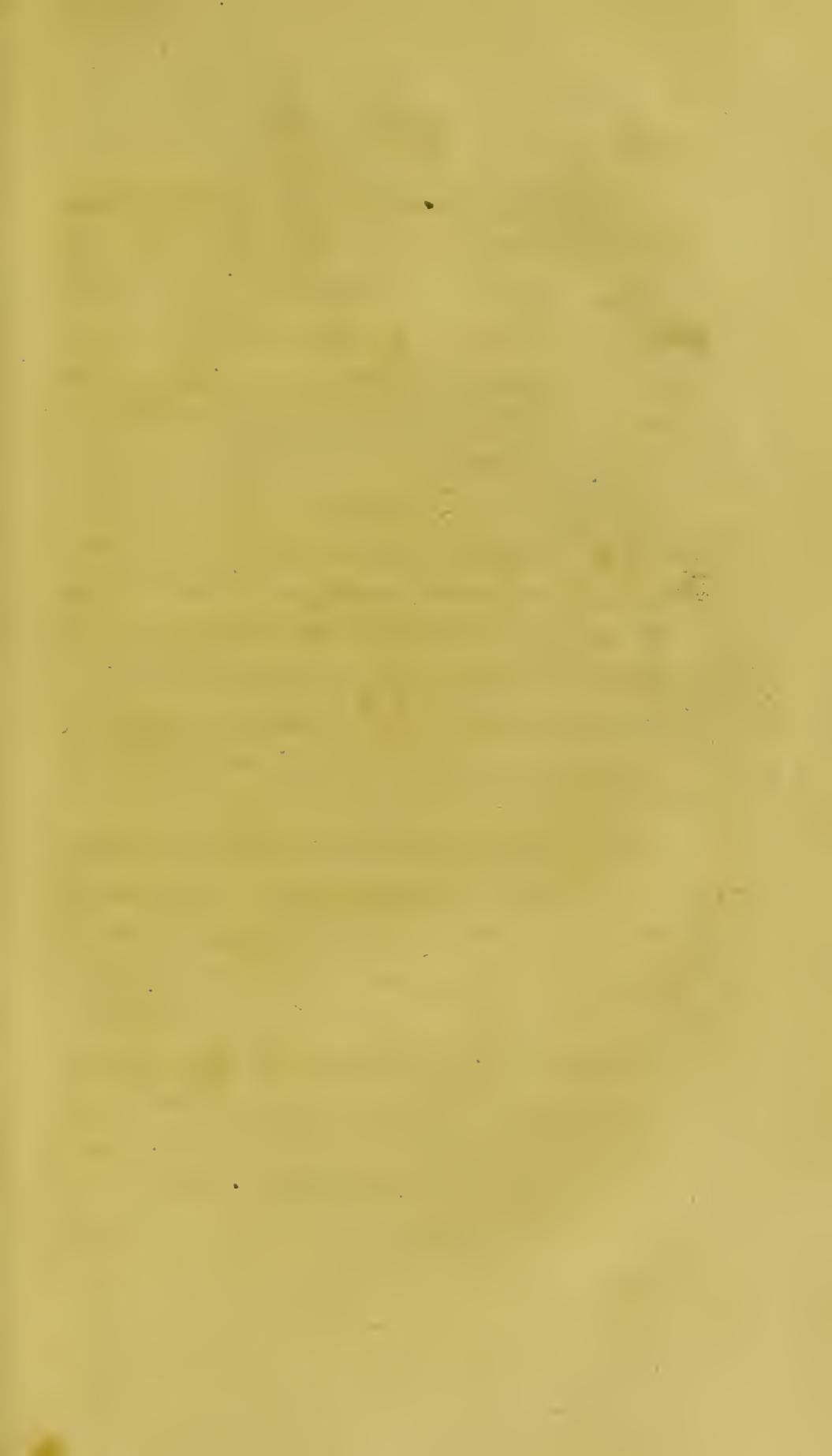
FIG. 8. is a pair of scissors, which are useful for cutting a piece of plaster, or rag. Fig. 9. and 10. are two knives, both of the same shape; only one is somewhat longer, and stronger, than the other. The blunt part has no occasion to be so long as the former.

FIG. 11. is the handle, which is ivory, and eight-square; and the neck, *d*, and the spring, *c*, are of steel. All these knives go into the neck, *d*. By pressing with the thumb the spring, *c*, the instruments are easily admitted, and firmly kept in the socket.

THESE knives are useful only for operating upon Nails. I shall demonstrate afterwards, the utility of the different shapes, when I treat of the Operation of the Nails.

FIG. 1. is a pair of forceps. The letter *a*, is a spring; *b*, a screw, by which the forceps may be closed, or opened. It is also necessary for operating upon the Nails.

BEFORE





BEFORE an operator proceeds, he must choose a well-lighted room. He must, likewise, have a seat not exceeding twelve inches high. Suppose, in every house, there is not a seat of this height ; but, in general, there are kitchen-stools ; so that if they are higher than the dimensions above, it is often very convenient for the operator, to lay them upon their side.

THE operator must place himself with his right side to the window ; and, consequently, the patient must sit directly opposite. See Plate IV. Fig 1. and 2.

IT is pretty common for friends, to wish to see the operation, and they generally occupy a very improper situation, *viz.* between the operator and the light ; which, however, should be guarded against by the operator, as light is of the greatest consequence to him.

THIS low position is of the utmost service, both to the operator and patient : For if the operator was to sit at an equal height with the patient,

patient, it would be exceedingly inconvenient ; as, in the first place, it proves very unhandy to the operator, who would be under the necessity of stooping too much.

SECONDLY, It would be very uneasy to the patient, because he is obliged to place his foot upon the operator's knee ; consequently, he would be under the necessity of lifting his foot by far too high.

IT would be particularly inconvenient for elderly, and corpulent people. Likewise, the patient should place himself, in an easy manner, upon a chair, not too close to the operator (see Plate IV. Fig. 2.) ; so that he may place his foot, in an easy posture, upon the operator's knee.

SOMETIMES the patient shews too much complaisance to the operator, by placing his foot too gently upon the knee. This, however, is hurtful, both to the operator and patient ; as, when he places his foot slightly upon the

the operator's knee, he very soon begins to tremble.

WHEREAS, if he were to put his foot firmly upon the operator's knee, he would sit quite easy, and not be subject to tremor.

THE operator, then, being thus placed (see Plate IV. Fig. 1.), in an easy posture, upon a low seat, places a towel upon his left knee. See Let. *b*. He then places his left leg over the right.

THE advantage of this position is, that it prevents his left leg from becoming wearied, by the weight of the patient's foot. The patient then places his foot upon the operator's knee. See Fig. 2. The operator should be provided with a box, as Let. *c*; takes the instrument, Plate III. Fig. 4. and fixes it into the handle, Fig. 5.

THEN the operator takes the instrument betwixt the thumb and first finger, pretty close to the cutting edge. See Plate IV. Let. *a*. The

operator then places his arm upon his right thigh, and the second and third fingers upon the toe where the Spina is seated. In this way, the operator's arm rests upon his thigh, while his hand is supported by having his fingers placed upon the patient's toe. He holds his instrument in a manner not very different from a writing quill.

THE operator and patient being thus seated, and having the instrument in his hand, as above described, takes hold of the Spina with the nail of the first finger of his left hand. The nails of the thumb and forefinger of the operator, should be kept pretty long for the purpose.

THE operator then makes an incision at the very edge of the Spina, which enables him to catch hold with the nail; in this way, he holds up the part, and dissects in an easy manner.

THE operator can always see, from the external appearance of the Spina, in what part the root

root is seated. See Plate I. Fig. I. Let. *a*, &c. Wherever the root is seated, the operator must proceed cautiously till he come to it, when, instead of dissecting straight on, he must so regulate his instrument, by inclining it downwards, that he may loosen the root: Then, with the point of his instrument, he must raise up the root, which, in a steady and cautious hand, will not be attended with difficulty.

WHEN this great object is accomplished, he must proceed to dissect the remaining part in the same manner. If a Spina has more than one root, he must proceed in the same cautious manner with each.

THERE are Spinae, of various descriptions, upon the toes; some of them having considerable excrescences round them, while others have nothing but the root itself.

THE operator may mark this distinction, from the external appearance of the root. There, likewise, often occur Spinae upon the toes, which with difficulty are extracted, owing

ing to several vessels adhering to them, which appear quite white: When so, the operator must be extremely cautious and nice; and, instead of dissecting as before, he must carry his dissection upwards, till he come to the extremity of the vessels, and then cut them, when instantly they retract and disappear.

THESE vessels are perfectly evident; and so sensible, when touched by the instrument, that the patient shrinks, and complains of severe pain. I myself found it often very difficult to operate in cases of this kind, as these vessels were grown into the Spinæ so closely, that I was obliged to cut them transversely; and when so, an effusion of blood is unavoidable.

I HAVE even extracted Spinæ, of this description, from children, not exceeding four years of age. Such Spinæ have commonly more than one root, as may be seen in Plate I. Fig. VII. Let. c.

A SPINA projecta requires the same mode of operating as the former, when there is only  
one

one root ; but is supposed to be a very painful operation, as it, in general, is inflamed and swelled. This is a mistaken notion, as the Spina, by the inflammation and swelling, is more loosened than otherwise it would have been. I have often extracted a Spina projecta, which was so deeply seated, that the synovia, between the joints, has come out. I had, however, one particular case, of this description, some years ago.

A GENTLEMAN consulted me about a very painful Spina projecta. When I examined it attentively, I observed that it was remarkably deep-seated, and had very little callosity about it, with little inflammation.

I WAS never timid in operating, even in the most difficult cases ; because when there is no callosity around the Spina, the operator is at a loss to get hold of it ; and this case was particularly so.

I THEREFORE began my operation, as described above ; only that instrument must be used, which is delineated in Plate III. Fig. 2.  
which

which is particularly well adapted to this Spina, as it is remarkably deep-seated, and narrow in compass. I, however, executed the operation with dexterity, without bringing any blood.

BUT when I took the Spina in my hand, and was shewing it to the gentleman, I was astonished, to perceive the synovia running from the orifice, whence the Spina had been taken, and running over the edge of the foot. I instantly called for a tea-cup, to collect that matter. I let it run, till it ceased of its own accord ; and, to the best of my calculation, it was about an ounce. I visited the gentleman twelve months after this, when I was happily informed, that his toe was attended with no inconvenience, and his Spina not grown again. But when it happens that there are several small roots, the operator, with the point of his instrument, can easily eradicate them, as they do not adhere very close. I have had such cases upon the joints of all the smaller toes, especially when the Spinæ were deep-seated : Some of them grew again ; others, not.

A SPINA





A SPINA between the toes, is called a Soft Spina. When it stands in the inner side, towards the operator's left hand, he may occupy the very same position as above.

BUT if it should happen to be seated towards the operator's right hand, he must then take a different position: The patient maintaining his former position; while the operator must sit by the patient's side, keeping his right arm at the patient's left. See Plate V. Fig. 3. The operator is then obliged to alter the position of his legs.

BEING thus seated, he rests his right arm upon the patient's leg, and proceeds with the operation in the usual manner. Such a Spina is always easily extracted, as it is seldom so deep as those upon the toes.

BUT when there occurs a Spina between the little, and its neighbour toe, close to the metatarsal bones, the operator must then change his position, as he was before seated directly opposite the patient; but must now incline

cline a little towards the patient's left side ; and the patient must place his heel upon the operator's knee, and direct his sole as much to the light as possible.

THE operator grasps with his hand the patient's foot, and catches hold of the little toe with his second finger, and separates it from its neighbour toe as much as possible. He then places the nail of his first finger upon that Spina, and, with his instrument, makes an incision, and gets hold of it with his nail, if possible. If this prove difficult to him, the forceps are very useful for the purpose (see Plate III. Fig. 1.) ; and so proceeds with the operation.

PATIENTS are often kind enough to call one of the family to keep the toes separate, in order to assist the operator. I, at first, often accepted of such aid ; but soon experienced more incumbrance than advantage from such assistants, as they, in general, were too curious, and I was obliged to request them to keep back their heads : Likewise, the fingers with

with which they held the toes, were often in my way. So I entirely rejected such assistants, and executed it much better myself.

THIS, indeed, is by far the most difficult Spina, of any, upon our feet: But if an operator becomes accustomed to it, he may easily extract it.

THERE is another, of the same species, and upon the same spot, which easily admits of extraction; because it adheres only circularly, and, in the centre, is quite loose: therefore an operator will find no difficulty in extracting it.

WHEN it happens that there are Spinæ seated upon the soles of the feet, the operator and patient must occupy the same position as above; only the patient must incline a little towards the right, and the operator somewhat towards the same. By this means, the light reflects more completely upon the Spina.

IN general, people are ticklish upon their soles; and it would be disagreeable to the  
U u patient,

patient, and troublesome to an operator, if he were unacquainted with the mode of preventing so uneasy a sensation.

EVERY person who is unacquainted with this, will, no doubt, in order to gain reputation, handle the foot of a lady, or gentleman, in a gentle manner, that he may merit the approbation of being what is called tender. If a foot is thus handled, a person, even though not very ticklish, will be rendered so, and thereby be very unpleasant: Therefore an operator should, when the patient's foot is placed with its heel upon his knee, grasp it straitly with a full hand, and hold fast.

HE then takes hold of the Spina with the nail of his forefinger, and uses the instrument, Plate III. Fig. 3. which is best adapted to the purpose, as the excrecence is much harder and thicker, and larger in circumference (see Plate II. Fig. IV. Let. *a*, *c*, and *d*,) ; and places the finger of his other hand very close to the sole, and makes an incision ; and accordingly proceeds with his operation, as described above.

To

To a beginner, it will be pretty difficult, at first, to discover the situation of a Concealed Spina; but whoever reviews attentively my treatment on this subject, will readily find out the cause of the complaint. Suppose, then, that a Concealed Spina occurs about the nail of the big toe—

AN operator is always consulted about a nail that is grown into the quick. He, however, may easily perceive, whether it is a Spina or not; as when it is a Spina, the *flaps* are always higher than naturally they should be: therefore this is an evident mark of distinction between them, which, if attended to, will prevent the operator from much unnecessary trouble and suspense.

IF, however, a Spina is not found in the flap, he may examine immediately below the edge of the nail for it; which if there found, he must take a slice from the edge of the nail, which is easily done: then the Spina comes readily into view, and is easily extracted.

IF the patient complain of great pain below the nail, the operator will observe a spot of a different colour from the nail. It is a very safe and easy operation to extract this; though the patient is commonly timid at such an operation, as the operator is under the necessity of cutting off the nail so far as the Spina is seated; which is done with the greatest ease and safety, because where the Spina is seated, the nail is loose: This is done, by paring off part of that nail, so far as loose, with the instrument, Plate III. Fig. 9. which is best adapted for the purpose.

HE will then observe a large Spina, which must be extracted in the same manner as above. They are seldom deep-seated: therefore are easily extracted, and rarely grow again; and the nail returns to its natural situation.

UPON the other small toes, the same complaint happens; the patients still supposing, that the nails are painful. An operator will seldom or never find the nails of these smaller toes grown into the quick: but will discover the cause

cause of the complaint; *viz.* a Spina, seated either at one of the corners, or at the front, close to the nail.

AN operator has seldom occasion to pare any part from these nails, as it is natural to suppose, that a person will have done this himself, as the pain obliges him to do so. He may then be certain, that the pain proceeds from Concealed Spinæ, which are easily extracted, as they are never deep-seated.

THERE is a Concealed Spina on the outer side of the little toe, of which I have treated pretty fully, and which is the longest of any on the feet. See Plate I. Fig. IV. *g, b, i, j, k, l.* To accomplish the operation, will be somewhat difficult. The patient, in the beginning of the operation, must place his foot fully upon the operator's knee, who proceeds as above directed.

HE will observe at the outer side, a round hard speck, upon which he places his nail, and makes an incision between it and the integuments;

teguments ; and continues to dissect downwards, so far as he can. He then directs the patient to point the toe a little upwards, that he may have easier access to dissect the under part.

THE patient maintains his former situation ; but the operator must alter his position, and seat himself upon the left side of the patient, placing his arm upon the patient's leg (see Plate V.) ; and continues his dissection, till the operation is completed. The instrument, Plate III. Fig. 2. is best for finishing the operation.

THERE is another Concealed Spina seated upon the regulator, which is somewhat inflamed ; but is not supposed to originate from a Spina. But if the operator loosen the regulator from the nail, he will find a Spina seated close to the integuments, which is easily extracted, as it is never deep-seated.

THE mode in which an operator extracts a Spina from the posterior part of the heel, is quite

quite different from the former, as he must sit upon a common chair, though the light must be on the same side (*viz.* the right); and the patient must place his knee upon a chair opposite, so that his sole may be towards the operator, who proceeds with his operation according to the directions stated above.

AN operator will often find some difficulty in extracting the Spina, as it is generally deep-seated, and thick; and accordingly occasions pain. But if it is well extracted, it seldom grows again.

I SHALL now proceed to describe the operation of the second species; *viz.* *Spinae pressæ*. The situation of the operator and patient, and the mode of operating, and instruments, are the same as above described. The operator must not expect, that he will find the root in the middle of this species, as in a *Spina pedum hereditaria*; and he may easily distinguish between the two. See Plate II. Fig. II. *g, b, i, j, k, l*; in which he cannot observe a root externally, as in Plate I. Of this species,

species, the rooty part is various. See Plate II. Fig. V. and VI. He will find in *g*, the rooty part as a half-moon; while in *b*, he will find it circular, &c.

HE must be cautious in operating, as when he has made his incision, he must direct his instrument downwards. If the root is not seated at this part, he must dissect, in an easy manner, till he come to that part where the root is seated.

IF, however, the root is circular, as exhibited in Fig. VI. Let. *m* and *q*, he must, after making an incision, turn his instrument immediately downwards, in order to get it to the root. The root of this species is not so easily extracted as of a *Spina pedum hereditaria*, because it adheres much closer to the integuments than the other species.

YET the operator will find no difficulty in extracting it. But it is hardly possible, for many operators, to extract it so completely as to leave no vestige of it, because this species is

is much more painful than Spinæ pedum hereditariæ: Particularly on the outer side of the little toe, the pain is much more pungent than on any other part where this species is seated.

THEREFORE, I cannot advise an operator to go so very deep, as it is hardly possible for him to extract the rooty part. He must either give great pain to the patient, or bring blood. If such thing should happen, though it is attended with no danger, yet it is neither agreeable to the operator nor patient; because when a little blood appears, he is obliged to leave off his operation. Therefore, he should not attempt to extract it completely; as if he leave a part of it, a piece of plaster, such as I use, should be applied, which will corrode whatever of the Spina remains.

THERE is another, of this species, which is much more difficult for an operator, as its situation is somewhat peculiar (see Fig. VI. Let. *r*); as several vessels adhere, in such a manner, in it, as described in *Spinæ pedum*

X x hereditariæ:

hereditariæ: But this species is a little more difficult. During the operation, he may easily perceive some white filaments: When so, he must rather leave a little of that hard excretion, than cut those vessels, as they bleed much, and are very painful to the patient. When he has finished it thus far, he will naturally suppose, that he has nearly completed his operation, and may with safety dissect it entirely: But he must be cautious, when he comes near the centre, as the integuments are grown up, and the callosity itself is very thin; therefore he would be in danger of wounding the cutis. But if he attends to my directions, as said in *Spinæ pedum hereditariæ*, he will be at no loss to execute the operation with exactness.

IF an operator is called to assist a patient, complaining of a painful callosity, he must use the instrument which I have described, as used for *Spinæ* on the sole of the foot. He will readily perceive what is a callosity; as, in his dissection, he will find it adhering very close to the integuments—much more so than a *Spina pressa*. See Plate II. Fig. IV. Let. *b, e, f.*

OF this species, there are several varieties: Some of them are very deep-seated, while others are nearer the surface. It would be improper for an operator, to venture to the very root of such a callosity, as it is impossible for him to extract it completely, with ease and safety; as this species gives much more pain, than either a *Spina pedum hereditaria*, or a *Spina pressa*.

BUT, however, by having it extracted three or four times annually, and by attending to the rules given above, a patient will be freed from his painful callosity. See the Treatment of Callosities. No doubt, every person, in general, who sends for an operator, expects a radical cure. This, however, I have often experienced, is attended with impossibility.

IN the beginning of my practice, I was of opinion that such a thing was practicable; as when I extracted a *Spina pedum* from the very root, I was of opinion that it would never grow again: But when I was called to the same person, to my astonishment, found, that it was as large as if it never had been extracted.

tracted. Others, which I thought were not so well extracted, have, contrary to my opinion, never grown again. This gave me great concern, as I was not able to find out the cause of such phenomenon.

A CASE.—I was consulted by a gentleman, who had a very painful Spina upon one of his toes. I, however, extracted it with some difficulty, as it was uncommonly thick, and at the same time very deep. This Spina, in the space of six months, became as large as before.

THE gentleman consulted me again ; and complained, that his Spina was as painful as ever. I repeated my operation, and ventured a little deeper than before ; so deep, indeed, as to cause it bleed : therefore was of opinion, that it would never trouble him again.

I WAS again consulted by him, in the space of six months after this, when I found him complaining very much of pain ; and, likewise, displeased at my ineffectual operation. In short, I attended this gentleman

five years successively ; and, every six months, extracted his Spina, and often ventured very deep.

AT last, however, he consulted me, about bringing it to a festering state. I told him, that I could effectuate this ; but he would be prevented from walking for some time. To this he did not object : and I, accordingly, applied medicines for the purpose, by which he was confined for a fortnight ; and I attended him every day, and examined the state of his toe, taking out, every day, as much of the putrid Spina as possible.

AT last, he solicited the aid of a surgeon, in order to cure the festered part, with which I complied ; and he was accordingly cured.

IN six months after this, his Spina was as complete as I had seen it at the very first. I then attended him for some years after ; but was never able to effectuate a cure.

ANOTHER case.—I attended a lady for twelve years, to extract six Spinæ from her

her feet. At the end of six weeks, her Spinæ were as complete as if they had never been extracted. Whereas, from every one of her children, I extracted Spinæ: some of them having been completely cured at the first; others, at the second operation: But to the lady herself, I never was able to perform a cure. In the end, however, six or eight months elapsed, without my being called; so I was at a loss what to think. I had occasion to make a visit in the family, when the lady came to me, expressing her sorrow for not having occasion to see me for such a long time, owing to her bad state of health; and, at the same time, told me, that she regretted very much, that her Spinæ would not cure in the same manner as in the rest of the family: But, since her indisposition, her Spinæ had totally disappeared.

To be sure, said she, I was often displeased at the uneasiness of my Spinæ; but, now, I would be happy to have health, and my Spinæ again.

I HAVE

I HAVE had several, who made similar remarks. This lady was very curious to know the reason, why her Spinæ would not cure in the same manner as in others of her family. I observed to her, that, in my practice, I had always found, that Spinæ, of many years standing, were with difficulty cured ; but that recent Spinæ, on the contrary, were more easily eradicated.

I SHALL here mention another case, still more convincing. A tradesman called at my house, to have a painful Spina extracted from his little toe. It was attended with so much pain, as often to prevent him from walking, and following his occupation. He told me, that if I would cure his Spina, he would with pleasure pay me more than my common fee.

I INFORMED him, that I never promised a certain cure ; but assured him, I would do my utmost. Accordingly, I extracted his Spina ; and, at the same time, desired him to call at me, whenever he felt any uneasiness from it.

IN

IN the space of five weeks after this, he called upon me, and shewed me his Spina, which was as large as before, which I again extracted ; and invited him to call, whenever he observed its growth. In the space of three weeks, he called, when I found his Spina in the same state as formerly. I then ventured a little deeper ; and begged the favour of my patient to call again, whenever he perceived it growing : at the same time informed him, that I would make no charge ; only wished to try, if it was possible to eradicate it completely.

HE readily agreed ; but said, that he was of opinion that it was impossible to eradicate it, because it was of forty years standing. He then called in a fortnight ; and his Spina was as completely grown as before.

THE rapid manner in which this Spina returned, was somewhat remarkable to me. We made an agreement, that he should call at me every fortnight, which he cheerfully agreed to. So he continued to call at me every

every fortnight, for a considerable time. At every operation, I ventured much deeper than the root, which caused my patient complain of great pain, which he patiently bore, hoping that it would be eradicated: But so ineffectual were my operations, that I could not observe the smallest difference.

WHAT is still more remarkable, I employed, at every operation, the most powerful medicines, but to no purpose. He still continued to call at me every fortnight; but I never again ventured so deep. In short, I have, every fortnight, extracted his Spina, during a period of eighteen months; and, at my last operation, perceived no alteration, more than at my first. See Plate I. Fig. I. Let. *b*, which represents the Spina externally; and Fig. V. Let. *b*, represents it internally.

I SHALL still further remark, upon the impossibility of eradicating completely all kinds of *Spinae*; as I have had several patients, whom I have attended for years: These patients have had some shocks of the

Y y gout;

gout; during the severe paroxysms of which disease, the Spinæ have dropped out so completely, as to leave no vestige of them. Others have informed me, that, after severe fevers, some of their Spinæ had likewise fallen out.

I HAD a message from a lady, of a family in which I had been frequently employed. After finishing the lady's operation, her husband came in, and expressed his happiness at seeing me; and requested me to extract his Spinæ: and, accordingly, put off his shoes and stockings; but I could observe no Spinæ. In a smiling manner, he asked me, why I did not proceed? I answered, that I could perceive no Spinæ. He then informed me, that he had frequently felt slight shocks of the gout: but lately had been afflicted with a very severe shock of it, which had completely eradicated his Spinæ; so much so, indeed, that I could not even observe the spot where they had been seated.

IN the space of five or six months after this, I was consulted by the same gentleman, to extract

extract his Spinae, which were become as large as ever. Several such cases have occurred to me. How then can it be supposed, that an operator should extract a Spina so completely, as not to grow again? When compared with the above cases, surely, no person can imagine, that any operation could remove it so completely, as when it drops out naturally, as in the above; yet they grow again. I think that we ought to be extremely happy, if we could, for all our complaints, obtain even a palliative cure.

I SHALL now give directions for managing properly a putrid Spina. This disease will, in a short time, deprive the patient of exercise; and will, in the end, exhibit a very disagreeable, and, at times, somewhat alarming appearance.

WHEN such an occurrence happens, it is either owing to improper treatment, or to the neglect of the patient; because when a Spina becomes painful, he does not apply for proper assistance, as he supposes that it

proceeds

proceeds from the state of the atmosphere (as described in the Symptoms): But the pain increases, when the patient attempts to relieve himself, by paring it: This, however, alleviates it only for a very short period, when it becomes worse; and, from time to time, the Spina inflames and swells, which prevents him from paring any more from it.

THE only remedy then is, to have recourse to a poultice, for allaying these Symptoms; but, from this, they obtain very little relief: On the contrary, it renders the toes, and foot, much more tender than before. So, in this remedy, they persist for some time, but without any advantage.

AT last, however, they require the aid of a medical man; who, when he sees it, is of opinion, that it is merely a Spina in a festering state, which he accordingly treats as the appearance requires. Doubtless, he will bring it to suppuration; and the patient will be relieved, and the orifice will close up: therefore the patient is happy, and has confidence that he is cured.

A MEDI-

A MEDICAL man sometimes, however, will find it very obstinate in healing. Suppose that it even is healed up, and the patient of opinion that he is cured, yet, in a short time, the same Spina will become painful, and return to the same festering state as formerly.

THE patient, being now a little better acquainted with it, encourages suppuration, hoping, by this means, that the root will be destroyed, which sometimes may happen. I shall here describe a case of this kind.

A LADY was troubled with a putrid Spina, for which she, for several years, assisted herself. At last, however, it became somewhat alarming; so that she sent for a surgeon, and related to him, that she had been accustomed, for years, to assist herself; but now it was so bad, that she could no longer do so.

THE surgeon then treated it in a manner becoming his experience and judgment. But I find, that a medical man, who is not conversant in this particular complaint, cannot easily procure

procure even a palliative cure; which will appear in the sequel. The surgeon then attended this lady for some weeks, without any material advantage.

HE observed, that as the disease originated from a Spina, it was proper that she should send for me, as I was particularly conversant in this line. Accordingly, the lady sent for me. When I visited her, she related to me the case. I asked her, if that was the first time that it had assumed the putrid state. She told me, that it had troubled her for twenty years; and that she was perfectly acquainted with its nature, so that she always relieved herself, by giving vent to the purulent matter: By this means, she was easy for six or eight months.

BUT now it was become so bad, that she could no more assist herself. I was perfectly acquainted with it, and treated it in such a manner as to obtain a perfect cure; which treatment is quite different from that of any other kind of Spinae.

I INFORMED the lady, that I could promise a complete cure ; but it required my attendance no less than six weeks. She was very happy in the hopes of a cure, and placed her confidence in me. I accordingly proceeded with my operation, and attended her for four weeks, every third day ; at the end of which, it had no better appearance than at first. At every visit, I took out so much of a spungy substance as at my first ; nay, sometimes more. But, however, I continued my visits for a week longer, without the smallest appearance of a cure. The lady then said, that she thought it was needless for me to attend any longer, as it apparently was no better ; and, besides, that she had suffered with it for twenty years, and was sure that it was incurable. Still, however, I promised her a radical cure, which again encouraged her. In short, I attended her two months before I completed a cure, visiting her every third day ; and, during a period of ten years, the lady has had no return.

I SHALL here describe another similar case. I had a message from a gentleman, who was troubled

troubled with a Spina, which, for some time, he alleviated by paring. At last, however, it became so painful, that he was not able to assist himself: Accordingly, he sent for me. When I examined his foot, I found the third smaller toe amazingly swelled, nearly twice the size of the big toe; and the foot very much inflamed: at the appearance of which, the family were somewhat alarmed.

I ASSURED them, that there was no danger; that it was nothing but a festered Spina. They asked me, if I could, with safety, make a cure? I told them, that I could, with absolute safety; but my attendance was requisite for two months, twice a-week.

To this they readily agreed; and I accordingly proceeded to operate. The operator and patient must sit as in Plate IV. The operator has no occasion to go deep; only make an incision, to let out the putrid matter; and as much of the callous part must be dissected, as possibly can be done with ease. The patient, from this, finds considerable relief, and is of opinion, that he is quite well; and is somewhat

what astonished now, that I should have spoken of two months attendance, as, according to his views, little more is requisite.

BUT, at my next visit, he was of a different opinion, as I had taken out a substance of a different appearance than at my first: So, then, the family and patient are both of opinion, that it merits attention. I attended during a period of six weeks, twice a-week, and, at every visit, removed the spungy substance; and completed a cure.

THE operator should be provided with some healing ointment; nay, at the first, a poultice is often necessary, for allaying the inflammation.

I DEEM it unnecessary to enlarge upon this, as the above may serve as a specimen. I cannot however leave it, without advising patients, whenever they feel more pain from their Spinæ than common, and observe the parts much inflamed, to have recourse to a

Z z practitioner,

practitioner, as much danger may happen from a neglect of this.

I SHALL now proceed to state the Treatment and Cure of a Spina Fibrofa. I am certain, that there is none who will, at first sight, distinguish what a Spina fibrofa is. He is no doubt consulted, to extract a Spina ; and accordingly proceeds in his operation, when immediately he will meet with a great obstacle, which will prevent him from proceeding according to his wishes, owing to the severe pain that the patient feels, and his being liable to bring blood directly.

THEREFORE, he must proceed to dissect the callous part round that Spina, which he may do without much pain ; but when he wishes to go towards the centre, he will find it impracticable, both on account of the pain and the blood.

THESE are certain marks of this obstinate species : So, if he wish credit, he must, in this way, operate every second day, and always apply

apply my medicine; which will be found in the sequel.

HE must, at the same time, restrain the patient from walking much, and strictly recommend the antiphlogistic regimen, and keep the affected foot in a proper degree of heat. If the operator directs, and the patient attends to these rules, he may perform a radical cure in the space of a fortnight. See the Treatment of *Spinæ Fibrosæ*.

I SHALL now favour the world with a present, which never before was known; and for the want of which, many of our fellow-creatures have, perhaps, fallen victims. I, as before said, tried various remedies, from which I could never procure the smallest advantage; but fortunately for the world, as well as myself, I discovered a very simple remedy, which may be considered a complete specific for this complaint; *viz.*

R. BLACK pitch, an ounce; yellow bees wax, an ounce; olive oil, half an ounce:

Melt,

Melt, and make a plaster, spreading it upon soft leather ; and apply it, as directed in the Treatment.

---

THE manner of operating upon children, is individually the same as in adults ; only a child should be placed upon the knees of one of the family. But if the child is unwilling to submit to the operation, it should not be forced ; as when they wish to keep the foot steady by such means, the operator is not able to extract the Spinæ well, under such circumstances. They should put off for six months more, when the child will submit more readily to the operation.

BUT I recommend to parents, nurses, and others who have the care of children, to examine narrowly their feet ; and whenever they perceive the smallest appearance of Spinæ, to have them instantly extracted, as, when recently taken out, they never grow again. I have the experience of knowing, that not five, of a hundred, have grown, which I recently extracted.

I SHALL

I SHALL now proceed to describe the manner of an operation, which is much more dangerous, and painful, than any of the foregoing ; that is, when nails are grown into the quick. Such an operation has always been considered very serious and difficult. Hitherto there has not been a method adopted, so easy, and safe, as the one I have always practised ; which I now offer to the world.

No doubt, when a patient is thus afflicted, he makes use of every means to alleviate the pain ; but every thing he does, proves more injurious to it, than if he had allowed it to go on agreeably to nature. All that he does, is, in the first place, to scrape it, in the middle, quite thin, supposing, that what is into the quick, will come out ; or, secondly, He pares the nail as short as possible. Thirdly, He attempts to cut out a little from the corner, thinking he will, in this way, relieve himself.

WHEN these means fail, he has then recourse to medicines ; and listens to the various advices of friends and neighbours. At last, however,

however, it becomes exceedingly serious. He then calls for the aid of a surgeon, who, undoubtedly, treats the case according to his judgment: But as he is not so very well acquainted with, nor has paid so very particular attention to this branch as I have done, so it cannot be supposed, that he will be so successful; as will hereafter appear, from a few cases which I shall describe.

SUPPOSE, then, that an operator is called to a case of this kind: He, and the patient, must be seated in the same manner as exhibited in Plate IV. Suppose, now, that the nail is grown in, on the big toe of the left foot, at the inner side, towards the right foot: The operator takes the handle (see Plate III. Fig. 11.), and fixes Fig. 6. into it; and grasps, in a full hand, the handle, touching the knife with his forefinger.

THE operator then places his thumb upon the affected toe, and, with his instrument, makes his incision a little towards the centre, from the flap, regulating it in such a manner,  
that

that the nail may be a little narrower than naturally it should be.

THE incision should be in the middle, and carried towards the end of the nail. He then catches hold, with the nail of his forefinger, at that slit: By this, he is enabled to look into the incision; and carries the knife towards the beginning. He then proceeds a little farther, till he comes below the regulator.

THE operator must not attempt to lift up that slice from the end, when the incision is made. During this part of the operation, he sees what he was doing. He must now take the forceps (Fig. 1.), and get hold about the middle of that slice, keeping that instrument in his left hand. He then puts the point of his instrument below the integuments, and gradually cuts the nail towards the beginning, which may be done with as much accuracy as if he saw it plainly, and with the same ease: because he can feel when he touches the nail; which he will, by degrees, cut to the beginning.

WHEN

WHEN he perceives that he has cut that slice to the very beginning, he then draws the forceps a little outwards, so that he may look in at the incision. If he observe the slice very deep, and adhering to the integuments, he must now dissect a little deeper.

HE must, however, take care, not to cut splinters from the nail, by dissection, which will be difficult to remove. When all this is accomplished, the operator takes the forceps, and gets hold of the slice nearer the beginning, and pulls towards the end of the nail, by which means the slice will always come easily out.

HAVING now given the directions necessary for an operator, when the nail is in, at the inner side of the left foot; I shall now describe the manner in which he must sit, and the mode of operating, when the opposite side of the same toe is affected. The operator must now alter his position: The patient, however, retains his. See Plate V. Fig. 3.

THE operator must then place himself by the patient's left side, and must change the position of his feet.

HE

HE places his right leg over his left, and puts the towel upon his right knee. See Let. *a*. The patient then places his foot upon the operator's right knee, and the operator supports his arm upon the patient's leg.

HE now makes his incision at the end of the nail: and the operator, with the nail of his forefinger, gets hold of the slice, which enables him to see what he is doing; and carries his incision cautiously down, towards the regulator. He is now obliged to change his instrument, and takes Fig. 7. (Plate III.) He likewise alters the position of the knife.

HE must now turn the handle of the knife upwards, which he holds with his forefinger and thumb, keeping his little finger upon the side, very near to the point of the instrument, and the blunt edge towards the hollow of his hand.

HE must, likewise, fix properly the forceps, and place the point of his instrument into the

3 A incision,

incision, and begin to operate gradually towards the beginning of the nail; and proceed as above directed. He then dresses the patient's toe according to art.

HE must likewise restrain the patient from walking, till it is nearly cured. In general, I perform a cure in the space of eight or ten days. If this operation is executed with exactness, the nail will never grow in again, during life; as a proof of which, I shall describe a few remarkable cases.

I HAD a message from a gentleman, to which I accordingly attended. He informed me, that he had a favourite-valet, who was very much distressed with a nail grown into the quick, which had unqualified him for his duty these four months. I then told the gentleman, that I would do all in my power to relieve him.

WHEN I examined the man's toe, I was very unwilling to operate. I then went to the gentleman, and told him, that I was not willing

willing to proceed, as his servant's toe exhibited a gangrenous appearance. He, however, insisted that I should proceed ; and that if I did not succeed according to my wishes, I should by no means be blamed. I therefore operated, and extracted the parts which were into the quick. In short, I cured this patient completely in the space of three weeks. It is many years since, and there is no appearance of the nail growing into the quick.

I SHALL state another case, still more singular, and worthy of notice. A lady, from the country, consulted me concerning a nail which was grown into the quick ; and, at the same time, flattered me concerning my character, as being famed for such cases. When I examined her foot, and saw her big toe, was much astonished, as I never before had seen such an appearance.

THE swelling of the toe was so considerable, that the end of the nail was sunk in, as well as the sides of it ; and the toe, according to my calculation, was not less than

two

two inches in diameter. I was not surprised, to find the nail so remarkably funk in ; because every person who has such a nail, attempts to assist himself, by cutting away as much from its end and corners as possibly he can, and scrapes it as thin as possible upon its surface, which is commonly recommended as the best mode.

I THEN questioned the lady, how long this nail had continued in that diseased state ? She told me, that during a period of two years, it had been in that state ; in which time, she had not been able to walk much ; and that she had been attended by the most eminent medical men, besides, trying various remedies and methods, but in vain.

I, FROM the appearance of the case, was not very willing to undertake the operation : But the lady, and her husband, insisted, and assured me, that they had been so strongly recommended to me, that, they believed, if I could not perform a cure, there was no other person could ; therefore pressed me to proceed, and shew my dexterity.

I ACCORD-

I ACCORDINGLY proceeded ; and so soon as I touched her toe with my fingers, blood came out. The reason of which is obvious ; as, during a period of two years, applications, of various kinds, had constantly been employed, by which means the parts were rendered quite tender.

I, HOWEVER, proceeded to operate : but found more difficulty in it, than in any case ever before under my hands ; because that nail, on both sides, was grown so deep, as almost to pass through the integuments below, and the constant flow of blood, prevented me from seeing what I was doing. However, I persevered, and succeeded as well as possibly could be done. I attended the lady every day, and dressed her toe. From day to day, it exhibited a better appearance, which was gratifying to both the lady and myself.

WHEN I had attended her a fortnight, she expressed a wish to go home, as her toe was as well as she could expect. Against this I stated objections, as I by no means was satisfied

fied that she was cured. She then informed me, that, for attendance, she did not need to remain here, as her father-in-law was a physician, and her brother-in-law a surgeon ; therefore could be attended to by them. They, and others, advised her to apply to me ; and she was very thankful to them and me, as she was much better by my operation.

I COULD not prevail upon her to remain longer, although I was by no means convinced that she was cured, though her toe was a great deal better. She accordingly went to the country. I begged the favour that she would let me know, how she continued. In the course of four months after this, I had a letter from the lady, requesting me to come out directly, as her toe was nearly in the same state as before.

I ANSWERED, that this would be in vain, as I could not remain there, nor could cure her by one operation ; and advised her to come to town, which would be much better. Her husband, however, again wrote me,

me, and mentioned, that he was of opinion that I could cure her at one operation; therefore begged me to take the trouble to come out.

I ACCORDINGLY went, and performed the operation very successfully, though her situation was somewhat precarious, as she was in the eighth month of pregnancy. After finishing my operation, I called the carriage, which brought me, to take me to the first inn. When the landlord came to me, I mentioned to him my business, and the case I had been attending. He appeared not more astonished than highly pleased; and told me, that this lady was considered to suffer either the loss of her limb, or life: Because, before consulting me, she had been visited by two of the most eminent medical people in this country, by a physician and surgeon, who advised her to apply to me, as they could do no more than amputate her limb. It is now several years since I operated; and, from that time, she has had no return of her nail growing in again.

I HAVE

I HAVE had many respectable people from that place, who purposely called, to applaud me for the great cure which I performed upon that lady; but from herself, I never had any thanks, or acknowledgment whatever, though both she, and her husband, electrified me with great promises, that they would put it into the news-papers, for the good of the Public, if I performed a cure. This, however, they have totally neglected.

I SHALL describe another case, pretty similar to the former. A young gentleman, in London, was plagued with a nail, of his big toe, grown into the quick. He, in the usual manner, assisted himself as much as he could. But, at last, it became so very painful, that he was obliged to consult a surgeon; who attended him for some time, but without any advantage.

HE then thought, that the surgeon did not properly understand his case; and, therefore, employed another, who likewise attended him for some time, but with no more benefit to him

him than the first. In short, he had been under surgeons hands, for his nail, during a period of ten months. It would be troublesome to state accurately, and at length, the treatment, and several remedies which were tried, as various corrosives, poultices, &c. &c. but all to no purpose.

THEY, however, often attempted to push scissors under the nail, to cut it off; but he could neither suffer this, nor could they succeed by it. Likewise, they attempted to pull it out by pliers, but in vain. At last, however, his case exhibited a very disagreeable appearance; and a consultation was accordingly called.

THE result was, to amputate his toe. The young gentleman was very unwilling to submit to the operation. So some of the medical people, having been informed of me, advised him to go to Edinburgh, as they had been credibly informed, that I had successfully cured similar cases.

HE therefore wrote to his friends in Edinburgh, and to Montrose, where Dr. Hunter, having heard of it, advised him, by all means, to apply directly to me. His friends here, called at me, and related the case; and asked me, if I thought I could undertake to perform a cure? I answered, that I had cured several similar cases: but it was still hard to be positive of success in this, as I had no knowledge of the case, though I never had failed in others; and, accordingly, should do my endeavour to cure him. They immediately wrote to the gentleman, concerning my success in this line. He therefore, without delay, came here; from whom I instantly received a message; and I, next morning, waited upon him, and performed my operation in the most dexterous manner. In short, I cured the gentleman in a fortnight; who went to England again; and no return of his complaint has happened. From him, and his relatives, I have received many thanks.

I SHALL only state another case. A professor, of Edinburgh, consulted me about a singular

singular nail on his big toe. Accordingly, he shewed me his foot, when I observed a very curious appearance.

THE nail, however, had a healthy appearance; but was loose as far as the beginning, and stood nearly a quarter of an inch up, from the fleshy part in the middle: but the regulator kept the nail very close to the integuments. This nail was somewhat harder, and thicker, than a regular nail should be, at his time of life.

THE reason why the nail was thus raised up in the middle, was, that it was very much enlarged in breadth; but fortunately for the gentleman, there was a plentiful supply of the unguis spongiosus, at both sides, below the nail, which prevented it from penetrating the integuments. Without this, that nail would, undoubtedly, have grown into the quick. I asked him, if he felt much pain? or where the pain was seated?

HE told me, that the pain was not severe; neither was there any inflammation. I observed,

served, that the pain, of which he complained, was about the beginning of the nail. From its situation, it could not be otherwise; because, as the end of the nail stood too far up, the beginning of it, of course, must press down. I advised him, to have that nail cut off, so far as it was loose, which, in my opinion, was the best method.

THE gentleman, however, objected to this, if otherwise it could be managed. I then treated the nail in a different way, by taking off a slice from both sides of it; which when I had done, the nail sunk upon the cutis: so I cut the nail a little shorter; and the gentleman put on his boot, and felt no more inconvenience from it. I, however, desired him to let me see his nail frequently; which accordingly he did: and it is grown upon the cutis again, to the end of the toe.

FOR several years, I have had the management of his nails: and have found, that that nail is become much thicker, and harder, than a natural nail should be; yet I cannot call it a deformed

deformed nail: but I am certain, that the regulator had been injured.

I THINK these few cases will serve as a specimen, to satisfy the curiosity of the reader, though I have had many more of a similar nature.

I SHALL state the mode of cutting deformed nails, which operation is not attended with either pain, or danger, to the patient; but is very difficult for an operator, owing to their remarkable thickness and hardness, and the improper mode which practitioners commonly adopt; neither have they proper instruments for this operation.

THE operator should be provided with the instrument, as delineated in Plate III. Fig. 10. which is adapted for this purpose only, and which is much thicker than any of the others. The cutler should be directed to temper it properly. When too hard, it will be apt to fly out in pieces; and when too soft, its edge will turn round. He then fixes it in the handle, Fig. 11.

IT

IT was the common practice, to cut such nails, piece by piece, from the end; and it has been attempted to operate by saws, or files, as said in the Treatment of the Nails: But all such methods are painful to the patient, and troublesome to the operator. It is however proper, that the patient should immerse his foot, for fifteen minutes, in warm water, which considerably softens the nail, and thereby very much accelerates the operation.

THE operator must likewise seat himself, as exhibited in Plate IV. and, with the instrument, make his calculation at what part he wishes to have the nail off; but must take care to take it off exactly at the end of the toe, so that, when the nail is cut off, the remainder may coincide with the end of the toe.

HE then takes the instrument with a full hand, and places his thumb at the end of the nail, and begins to cut, in a sculping manner, from the one side to the other, on the surface.

At

At first, it will be somewhat difficult, as the surface of the nail is remarkably hard; but when the surface is removed, it is softer: so, in this way, he continues, till he has cut it nearly off. He then may attempt to pare it off: But if he do not succeed, he must proceed as before, when, in general, he will find, that it is so soft, as to admit easily of being pared; at least, I never failed, in this way, in finishing this operation with ease.

IN general, one side of the nail is harder than the other, so that the hard side will commonly break off, as the deformed nails grow in layers. The operation being thus finished, he must, with the same instrument, make smooth the end of the nail, and thin it as much as possible. He now changes this instrument, and takes Fig. 9. and puts it into the same handle; and as there is always some soft substance along with the unguis spongiosus, he must, with this instrument, remove it as completely as possible.

I SHALL

I SHALL now proceed to describe the mode by which a person may assist himself, to pare his nails, and to extract Spinæ. He must seat himself with his right side to the light; and instead of placing his back to the chair, he must direct his left side to the back of it, and place his heel upon the fore-corner of the chair. See Plate V. Fig. 1. The reason why I have given these directions, is, that, from experience, I have found them the most proper; and they serve several important purposes: because, if a person wish to extract a Spina himself, and were to take any other position, he would find great obstacles; as when he seats himself upon one, and places his foot upon another chair, his foot is by far too distant from his eye, which prevents him from seeing what he is doing; or if he wish to place his foot upon a stool, lower than the chair, he is obliged to stoop by far too much, and he cannot keep his hand steady, nor can he breathe easily.

BUT when he places his foot according to my directions, he will find the greatest advantages.

tages. At first, he places his left arm close to the back, and his foot upon the corner, as said above. Secondly, He may take hold either of his leg, or foot, with his left hand, which of the two he finds most suitable for the operation. This position is attended with considerable advantage. Thirdly, His right arm is quite free; so, in this way, he may assist himself with the greatest ease. And for the mode of operating, see the Operation for *Spinæ Pedum*, page 334.

HAVING now stated all the different cures, both palliative and radical, and likewise described the easiest and safest mode of operating, I shall now point out the mode of Prevention of *Spinæ pedum*, which, of all others, is the most important; and which may be effectually accomplished, if attention is paid to children. To effectuate this important object, very particular attention should be paid to the feet of children, from twelve months old, to ten or twelve years, by parents and nurses.

If they should observe any spot (as mentioned in the Formation of *Spinæ pedum*),

they should bathe the child's feet in warm water (as directed in the Pediluvium), and rub that spot with a coarse towel; and the rudiments of the Spina will easily rub off.

SHOULD it, however, be so deep-seated, as to resist the towel, it may easily be removed by one of the nails; and, on that spot, a Spina will never grow again. If these simple things are properly attended to, they will prove the happy means of preventing, during life, these painful excrescences.

IT is a positive fact, that a great many, nay, the most of Spinæ, are, in this way, accidentally prevented from growing. This is the reason why, in families, we find one part afflicted with Spinæ, while the other branches of the family never were pestered with them. For instance, I have repeatedly found mothers afflicted with a certain number of Spinæ, and certain of their children with the same number, and exactly on the same spots; while, on other members of the families, I have observed fewer, or, perhaps, none at all.

AGAIN,

AGAIN, I have frequently met with parents, who were entirely free from Spinæ, and yet found their children afflicted with several. Therefore I am convinced, that, if Spinæ were not accidentally prevented in their rudiments, there would not be a human creature free from them.

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REGULAR practitioners, who favour the world with their documents, are commonly judicious enough to advise, in strong terms, the Public, to guard against advertising quacks, as they are pleased to term them.

INDEED they are right, both as it very much concerns their own success, and frees the credulous from double expence. I, however, am differently situated; as, in the first place, there never was a regular system established for my business: nor could the world be very much deceived by travellers in this line, as their practice is seldom attended with danger; though it has always been supposed, that

that when a Spina is pared, or extracted, till it bleeds, it is attended with danger.

ON the contrary, I have, in my practice, often brought blood, yet never observed any dangerous symptoms from it. Indeed, I may flatter myself, that there never was a man who had such unbounded practice as I ; yet I never had an accident, though I have had narrow escapes—a few of which I shall relate.

I ATTENDED a young lady, at a boarding school, who had two festered Spinæ. I accordingly operated as they require ; but they were so much festered, that her feet were very much inflamed and swelled. I directed her to keep her feet warm : But as they were very much swelled, she could not put on her shooes : so she walked about, in the house, with her stockings only ; and, in this way, her feet catched cold, which very much increased the inflammation.

AT my next visit, I was very much startled at the appearance of her feet, which were much

much worse than at my first visit. The lady, then, desired to see her mistress. She accordingly came ; and when she saw her feet, was very much alarmed ; and directly sent for a surgeon, not thinking me sufficiently qualified to cure the lady's Spinæ. I was very much pleased, that another practitioner took the case in hand, because they supposed, that I had been the occasion of this appearance ; while, in fact, they knew, that the Spinæ were festered, and that it was entirely owing to the lady's neglect. Now, suppose that this lady's feet had mortified, and she died, it would have been said, that I had operated, which had proved the occasion of her death.

ANOTHER narrow escape.—I attended a physician, and extracted some Spinæ from his feet, who was so highly pleased with my operation, that he personally recommended me to a lady ; and informed her, how well he now walked, and how easily I extracted them.

THE lady gave orders to her servant, to desire me to call at her the next morning, at ten

ten o'clock, which, fortunately, the servant neglected: When at the very same hour at which she wished me, she was sitting at breakfast, and died suddenly. Suppose, then, that I had received the message, and I had, at the same time, had her foot to operate, and she had died under my hands, what would have been the consequences ?

SURELY, every one would have said, that this lady died under my hand, while extracting a Spina, which would have circulated much more rapidly than a news-paper. I believe, no person would have had the courage to employ me after this; though the greatest part would have been convinced, that I was not the cause, yet it would have been a very great stain to me, or to any other operator.

AGAIN, I attended a merchant several years, to extract a Spina every six months; and about fourteen days after my last operation, he died of a mortification on his hand. Suppose, then, that the mortification had taken place upon his foot, from which I extracted  
the

the Spina, would it not have been said, that my extracting the Spina was the cause of it? Therefore I cannot speak against quacks in this line, as they, in general, are ignorant of the nature of this excrescence, though they all promise an effectual cure, which is more than I ever could do; nay, they are so bold as to say, No cure, no pay! and further promise, to operate without the least pain. To this last, I agree, as they seldom venture so deep, as to cause any pain. Their operation renders the patient easy for a short time. The only risk that a person runs from a stranger, is the loss of half-a-guinea, or a guinea. But such strangers never remain long in one place.

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## P E D I L U V I U M.

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I SHALL now proceed to give proper directions for bathing the feet, which is not only suited to the ease and comfort of persons, but is often very conducive to health.

THERE are only two baths for the feet, the Warm and Cold Baths. In these, there are several Temperatures. Very little attention, however, is often paid to these varieties ; and little regard observed concerning the proper time for using them. Some are in the habit of bathing their feet when they go to bed ; others, when they rise in the morning ; others, again,

again, when they come from abroad, or from walking, either for cooling themselves, or for removing the dust, which their feet may have collected from their journey.

WHATEVER respects the health and comfort of mankind, should not only be rendered intelligible, but should be reduced to as simple and expedient modes as possible.

TO accomplish this, I shall attend to these two different kinds of Baths, and describe the mode in which they are used, beginning with the first in order; *viz.* the Warm Bath, which is by far the most convenient for the purpose. The greatest part of people are in the habit of bathing their feet in the morning, when they call to the servant to bring them water.

THE servant is already acquainted with the business, and knows that the water must be warm. But, in general, it is several degrees too warm; indeed so very warm, that when the feet are immersed, the person is obliged to withdraw them instantly.

THIS evil is sometimes remedied, by the addition of cold water; at other times, it is allowed to cool of itself. Sometimes a person, after having first immersed his feet in the water, finds it too warm, which obliges him to withdraw them, and wait a few seconds; when the same experiment is made. In this way, the feet become more accustomed to the temperature of the water, till at last it is found answerable, as the person supposes; the error of which, I shall point out in the sequel.

BESIDES, there are different modes for preparing this bath: Some use soap; some, bran and oatmeal; while others make use of sweet milk.

TO these varieties of composition, I do not intend to state objections: but shall subjoin my method, which I have found, both more agreeable to the Public, and apparently more conducive to health; which will be found in its proper place.

LET

LET us now consider the effects of the bath, when too warm, and the feet too long continued in it.

LET us, for a moment, attend to the state of the cuticle, which, on the lower extremities, is often covered with scales ; particularly, in those of people advanced in years.

THESE scales prove obstacles to perspiration. The warm bath, by softening the cuticle, throws off these scales : consequently, in this way, it opens the pores, relaxes the parts, and thereby increases perspiration ; and when the feet are too long continued in the menstruum, a certain proportion of it is absorbed.

IT is likewise customary with people, after bathing their feet, to dry them a little, and then pare their nails, supposing that these substances are somewhat softened : But, in fact, they are no softer, being only somewhat more flexible.

WHILE

WHILE performing this operation, the parts are exposed to the atmospheric air, which has an easier access, than before the parts were so relaxed.

AFTER having performed this operation, they feel their feet several degrees colder than they were, previous to the use of the bath.

LET us now attend to those who bathe their feet often. They do not always pare their nails; but keep their feet too long in the water, as they feel themselves pretty comfortable. When they withdraw their feet, they, in a quick manner, dry them, and put on their stockings. By this neglect, the feet remain damp for a considerable time; nay, often so much, that the stockings become damp. Particularly, those people who are apprehensive of catching cold, dry their feet much quicker than those who are not so scrupulous.

THOSE people, when walking upon the street when wet, are so much afraid of cold and

and damp, that they, when come home, change their stockings. Likewise, in warm weather, they observe the same rules, as their feet then perspire.

THEREFORE, every person, when he has bathed his feet, should particularly attend to dry them properly ; the mode of which, will be found in the sequel.

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I SHALL now consider the effects of the Cold Bath.

THOSE who are in the habit of bathing their feet in cold water, fancy that it strengthens them, being inattentive to the temperature of the water, in different seasons ; for, in some seasons, the temperature of the water is several degrees colder than in other seasons.

IN my practice, I have often observed such inaccuracies : As when I have received messages

sages from gentlemen, I have observed, that they, after having warmed themselves, by walking or riding, and were come into the house, have ordered water ; and, while in one perspiration, have suddenly plunged their extremities into the cold bath, and afterwards wiped them in a careless manner.

LET us, for a moment, attend to the effects of such practice. When a person is exceedingly warm, from fatigue of walking or riding, in a very warm day, his blood must be at 100 degrees, or upwards, of Fahrenheit's thermometer, particularly in his extremities, while the water does not exceed 40 or 50 degrees. The effect of such a sudden change, must indeed be very powerful ; but this I leave to physiologists.

HAVING now stated, the common modes of using both the warm and cold baths, the errors of which I have pointed out ; and shall therefore proceed to offer such instruction, and prescribe such rules, as I, from experience, have found most salutary.

IT is evident, that there are different constitutions ; some having naturally perspirable feet, while others have not.

THEREFORE, it was a constant consideration with me, that the improper mode of using indiscriminately the Pediluvium, might be productive of several diseases ; and, at the same time, seemed to merit attention, by which it might be regulated.

FROM these considerations, I was induced to make repeated experiments, which, in my practice, could easily, and safely, be executed. From the result of all these experiments, I observed, that the most proper degree was at 80. I make no distinction between those who have, or have not, perspirable feet.

IT is proper, that every person should be provided with a small tub, kept solely for the purpose : because basons are not so convenient for this purpose ; for they are commonly too small, and do not admit the feet, which is a proper objection to their use. It is likewise proper,

proper, that both our feet should be immersed in the water at the same time.

THE manner of preparing the water, is as follows: Boiling water should be poured into the tub, till the bottom of it is covered: It must then be allowed to stand a few minutes; and, after this, a certain quantity of cold water must be poured into it. Then it must be impregnated with hot water, till the thermometer stands at 80 degrees. My reason for thus regulating the bath, by first using hot, then cold, and again hot water, is, that if we first use cold, then regulate it, by hot water, to 80 degrees, the bottom of the tub will be somewhat colder than the water; and a person would find it somewhat disagreeable, because the soles of his feet are colder than the water.

OF all the compositions used in the menstruum, I prefer bran, because it serves two important purposes. First, It cleans as well, if not better, than any other substance. Secondly, The person does not incur the danger of putting his stockings upon damp feet; for

for when any of the bran remains upon the skin, it causes him to wipe his feet carefully, and thereby serves against any bad effect originating from dampness.

THOSE people who have perspirable feet, should keep them only five minutes in the bath ; and bathe them three times a-week in summer, and twice in winter. If they are apprehensive of catching cold, they should defer paring their nails at this time.

PEOPLE whose feet do not perspire, should bathe them twice a-week in summer, and only once in winter, keeping them in the menstruum ten minutes.

THE most proper time for bathing the feet, is at bed-time.—Those who wear under stockings, should always place the right side of the stocking next to the skin, as it, in general, is more plain, and softer, than the other side.

SOME people, however, have considerable objections to bathing their feet, as they suppose,

pose, that such habit predisposes to gout, or rheumatism. I do not presume to dissuade them from their bias; but advise them to take a coarse soft towel, and, with it, wipe their feet carefully twice a-week, which will keep them easy, and take off the scales.

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AN

E S S A Y

TO

T H E A R M Y.

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I HAVE now, in a concise manner; offered my mode; which, I hope, will, if punctually attended to, prove more easy and salutary than the common practice: If so, my object is gained, as I have solely the welfare of my fellow-creatures at heart. I cannot however conclude, without prescribing certain rules for a class of men, particularly liable to troubles on their feet—I mean the Military.

“ A CLEAR-SIGHTED monarch, Frederick  
“ the Great, instructed by daily experience, of  
“ the accidents which may arise from too  
“ long

“ long marches, introduced a method, during  
“ the Bavarian war, of one campaign, which,  
“ it were to be wished, should be introduced  
“ and followed every where. This monarch  
“ gave orders, that the surgeons, in the army,  
“ should inspect the feet of the soldiers, du-  
“ ring, and after the march ; because the least  
“ heating, followed by cold, was enough to  
“ deprive the soldier of strength, and hinder  
“ him from fulfilling his office.” This pru-  
dent foresight, on the part of this monarch, is a  
proof of the attention which every captain  
should pay to his company, and every person,  
in particular, to himself. The greatest hard-  
ships, during our whole life, arise often from  
a neglect of taking the evil in time.

To offer any comment upon this monarch's ingenious and necessary injunctions, would, in me, be vain, as every person will admit his observations to be excellent and essential. Indeed, no man can in a more honourable manner employ his time, and devote his attention to a subject, in itself, more meritorious or useful, than he who labours to point out proper modes

modes, for securing the soldier against, or at least for lessening, the evils necessarily occasioned by too long and severe marches. There is not, in my opinion, a duty more important, nor a virtue more conspicuous in a commander, than attention to the health and comfort of his soldiers. As they are often forced to march, in time of war, on very marshy, sandy, and broken paths, the first part which commonly fails them, is their feet ; which, when disordered, often completely indispose the whole system, prevent them from marching, and thereby incapacitate them from doing their duty.

IT is a duty incumbent upon, and indeed punctually discharged by commanders, to inspect narrowly the armour, dress, &c. of the soldiers. But, alas ! this is only attending to the external appearance, while the more important things are neglected ; very few of them recollecting, that the feet of the soldier, in particular, are absolutely essential to health, and to every part of his duty.

LET us therefore attend to the consequences originating from mismanagement, or neglect, of the feet of soldiers. Suppose, then, that a soldier sets out upon his march, with shoes which do not fit properly. If they are too tight, his toes are too much compressed ; consequently, he is prevented from stretching them, in order to walk freely. Though, in the beginning of the march, he does not find them so inconvenient ; yet when fatigued and heated, his feet begin to swell, and are thereby much more compressed, till at last he cannot proceed with ease along with the regiment.

THIS is not the sole disadvantage. But what is worse, many accidents happen from tight or short shoes : As I myself have conversed with several officers, who, from marching with tight or short boots, have lost their nails ; and when they took off their stockings, have observed a quantity of blood, and the nail of the big toe in one of them. For this, see the Treatment of Deformed Nails.—Suppose that a soldier has Spinæ on his feet ; undoubtedly, by tight shoes, they are rendered

dered much more painful than by a shoe which fits exactly.

THE pain of the Spinæ is considerably increased by heat; and the pressure is more severe, from the parts being swelled, which distends the Spinæ considerably, and thereby much more aggravates the pain. See the Symptoms.—Besides, it often happens, that the feet become blistered, from tight shoes.

LET us now attend to the consequences of the shoes, when too wide: They are quite different from the former; as the feet, then, are in constant motion within the shoe, so the friction is by far too great. In this way, the feet do not swell; but sometimes it happens, that the cuticle, in some particular part, is rubbed off. If such a thing happen, the pain is more severe than from blisters. Besides, it is not so easily cured as a blister.—This is not the only disadvantage of wide shoes; but, in the course of a few months marching, a  
painful

painful callosity will be produced. See the Treatment of Callosities.

WE shall now take into consideration, the disadvantages attending perspirable feet. Those who are liable to this, are themselves ignorant of the consequences arising from improper practices; and, at the same time, are neglected, as to proper directions, by the surgeon. Men, of this habit, are commonly languid and feeble, especially if exposed to fatigue; consequently, when the feet are in this state, it must prove a very great obstacle to marching. People, of this habit, require much more attention than those who may suffer from their shoes; because, when upon their march, the fatigue increases the perspiration, which seldom fails to produce what is vulgarly called Scalded Feet.

THIS perspirable matter possesses two principles. First, It is somewhat corrosive; because, after travelling for some time, a person finds, that the cuticle is corroded upon some part of his foot: likewise, between the toes; particularly

particularly at the first joint, close to the metatarsal bones, the integuments are very much inflamed. It may perhaps be said, that the cuticle has been wore off by friction. With this I cannot agree ; because, where the friction is greatest, the cuticle is never corroded. As the upper surface of the toes is less liable to friction, we might suppose, that the cuticle there, would not be wore off. On the contrary, on the soles, where the friction is greatest, the cuticle is never corroded ; while it never fails to take place upon, and between, the toes, as said above.

THE second principle of this perspirable matter, is somewhat inflammable. To satisfy myself upon the nature of this matter : I never had the fortune to collect a sufficient quantity, but adopted a simple and easy method, which tended to shew the above-mentioned principles. I made my experiment in the following manner : I took a stocking, impregnated with this matter, and dried it before a fire. I found that it was scorched before it was quite dry, which surprised me. I then took another

stocking, impregnated with water, to an equal dampness with one that was wet by perspiration, which I dried before the fire, both being exposed to an equal heat. I found the latter scorched before it was dry, but the former was neither scorched nor dry. I then made my observations much more convincing; *viz.* I took a dry stocking, and placed it, along with another that was moist by perspiration, before the fire, at an equal heat; and found the latter scorched quite brown, while the former was not touched. From this I am convinced, that the perspirable matter is not only corrosive, but, likewise, somewhat inflammable.

LET us now take into consideration, the effects of the improper management of the feet of the military. When a soldier rises in the morning, and is prepared for his march, but has too tight, or too wide shoes, or, perhaps, his stockings impregnated with perspirable matter, he sets out with the regiment; but although he has courage to commence the march, yet, in the course of eight or ten miles,

miles, his feet become very uneasy, till at last he is forced to give it up entirely.

WHAT, then, is the remedy. Why, he must be placed upon the baggage-waggon, and carried along with the regiment. Besides, the feet, after a fatiguing march, are, as formerly stated, often blistered, or injured, by some extraneous body, as sand in the shoes: When so, the eager soldier attempts to remedy this, by opening the blister, by which means he intends to cure himself: but, on the contrary, he very much injures his feet; then the blistered cuticle is wore off; the part, thus denuded, becomes worse, and is liable to run to a festering condition.

BESIDES, from inattention, the nails are often neglected, and are liable to accidents from improper management; as when they are too long, they are apt to be forced out; or when too short, to grow into the quick. Under such circumstances, the soldier is prevented from marching along with the regiment.

HAVING

HAVING now clearly stated, the disadvantages originating from the improper management of the feet of soldiers; I shall now describe the most easy and effectual mode, which will be useful in preventing these inconveniences, and guarding against the above-mentioned accidents. First, A soldier should be provided with shoes which fit exactly, having the upper leather pretty soft. Secondly, The stockings should be made as plain as possible: and should be washed frequently; as when they are allowed to be too foul, they become stiff, and consequently may produce blisters. Thirdly, Those who have perspirable feet, should wash them three times a-week in summer; and, in this season, should wear linen or cotton stockings; and should have an additional pair, more than those who have not perspirable feet.

WITH respect to those who happen to get blisters on their feet: Several methods have been adopted, for preventing this complaint: some recommending, to anoint the soles with tallow; others, to pour spirits into the shoes, which

which should tend to harden the cuticle. I will not criticise these methods, as several others have been tried, but to no purpose.

THEREFORE I shall not offer any preventative, but recommend an easy and effectual remedy for it. It should be managed in the following manner: Take a large needle, with a worsted thread, and push it through the blister; then cut off the needle, leaving two inches of the thread at each orifice. This remedy has two advantages: First, The thread sucks up the acrid matter: Secondly, It keeps the cuticle close upon the cutis, and thus prevents sand, &c. from getting in; and needs no further attention, remaining till a new cuticle grows again, when the blister wears off.

I HAVE frequently observed blisters, after a puncture was made, filled up again. They are commonly opened by a knife, or scissors; but afterwards they become very painful; and even have been so bad, as to require medical aid.

I HAVE

I HAVE the experience of the efficacy of my directions. As I was considered the most proper person for assisting in all diseases of the feet, so I have repeatedly been consulted by travellers, who complained of perspirable feet, and blisters. To all of them, I prescribed the above directions ; and have the satisfaction of assuring my readers, that these people, when they returned, called at me, and returned me many thanks for my advice, which never failed in rendering them comfortable. Therefore every Commander should desire the surgeon, to attend particularly to the above simple and easy mode of managing the feet, which will be of great advantage to an army, and comfortable to the soldiers, which is the greatest object.

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I HAD now, in appearance, put the finishing hand to my Work, when I judged it would not be improper to subjoin the following particulars.

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## A P P E N D I X.

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I HAVE practised for many years in this line, in this metropolis, with the greatest success, and have attended people in the highest ranks, more so than any man in practice could ever boast of; yet my busines has been considered as somewhat disreputable, as a man of my profession is called a Corn Cutter, and is scarcely counted worthy of being a member of an Honourable Society. The proof of this will appear.

IN the year 1796, I applied at the Surgeons Hall here, for examination, in order to obtain a Diploma,

a Diploma, though I by no means intended to practise either surgery or physic; yet, after having studied, in the University of Edinburgh, during a period of five years, I considered myself qualified, and entitled to have a Diploma. When I went to the President, and informed him of my intentions, he told me, that they examined students every month, who wished for Diplomas: But if there was only one, they did not call a meeting for him alone: But if another should apply, he would let me know.

I THEN asked, if I would be first called upon by the Surgeons, as I was the first who had applied. He answered, "Undoubtedly, " as you are the first who have applied, you "will be first examined."

I HAD information from the President, that more students had applied for examination. Accordingly, I lodged my money with the Secretary, from whom I received a ticket. Five students appeared for examination—when one of the number came in, and told us,

us, that he did not know till this morning, that he was to be examined; and said, that he had not seen a book these twelve months.

IN a short time after this, a medical gentleman came, and looked into the waiting-room; and went to the surgeons. He soon came out, and called the said young man to the door; who, in a short time, was called upon by the examinators; while I was greatly disappointed, as I was promised to be the first. In the space of ten or fourteen minutes, the young man came out; when we inquired, if he was accepted? He said, he did not know. We then inquired, upon what subject he was examined? He answered us, D—n me, if I know. A little after, he was called in again; and came out *accepted*.

ANOTHER student said, If they examine me upon anatomy, I may as well stay out. Yet he was directly called; and, in a short time, came out: but did not know, whether or not he was accepted: When instantly he

was called in again ; and came out, with a joyful countenance, accepted. Another, after him, was likewise accepted.

I was called (being the fourth), and was nearly an hour under examination ; when I was ordered out : and, in a short time, was called in again ; when they informed me, that they could not accept me. I replied then, “ I have answered almost every question you asked me concerning surgery ; and if you ask me respecting all the operations which belong to surgery, I am capable to answer.” They said, “ We have agreed amongst ourselves, not to accept you.”

I was then in the habit of visiting annually Aberdeen : So I accordingly set out towards the North ; when I stopped a little while in Dundee. A surgeon, from Edinburgh, met me there ; when we had a little conversation together. I told him, that I was going to Aberdeen ; and, at the same time, was intending to apply at the College there, for a Diploma. He asked me, if I had

had taken with me any Certificates from Edinburgh? I told him, I had not. But though I was capable of undergoing examination, he observed, that, as I was a German, and perhaps deficient in the language, these Certificates would have saved the Professors, and me, much trouble. But, however, he was so good as to give me a letter to his friend, Professor Gordon, of that University.

I ACCORDINGLY went to this gentleman, being accompanied by Professor Kid, who was well acquainted with me. I accordingly shewed him my College-tickets, which he desired me to leave with him, and he would call a meeting of the other Professors, and shew them; when, in a few days after, he returned my tickets, with the following letter.

To

## TO PROFESSOR KID.

*King's College, 10th January 1796.*

DEAR SIR,

PLEASE return Mr. Lion his Medical Tickets, which you will find inclosed. They shew Mr. Lion's having had a regular education; and, by the little conversation we had, I could observe that he is a well-informed gentleman.

PROBABLY he will find no difficulty in procuring an attestation and recommendation, from Dr. Gregory, Dr. Rutherford, Dr. Monro, Dr. Black, Dr. Duncan, any two of them, or any other two Physicians of note, there, or at London.

THO. GORDON, PR.

I ACCORDINGLY went to Edinburgh, and procured Certificates, in the following terms.

CERTI-

## CERTIFICATE I.

I, DR. JOHN BARCLAY, do hereby certify, That the bearer, Mr. Heyman Lion, is a gentleman of a most unexceptionable moral character; that he has gone through a very full and regular course of Medical Education, at the University of Edinburgh; and that he is well entitled to the Degree of Medicinæ Doctor.—Given at Edinburgh, 13th July 1796.

JOHN BARCLAY.

## CERTIFICATE II.

*Edinburgh, 13th July 1796.*

I HEREBY certify, That Mr. Lion has had a Medical Education; that he has a good moral character; and, in my opinion, is possessed of the usual qualifications that entitle a person to the Degree of Doctor Medicinæ.

J. YULE, M. D. COLL.  
REG. MEDIC. ED. SOC.

CERTI-

## CERTIFICATE III.

I, DR. WILLIAM FARQUHARSON, Fellow of the Royal College of Surgeons of Edinburgh, &c. certify, That I have known Mr. Heyman Lion for many years; that he has a good moral character; has had a regular Medical Education; and that, in my opinion, his medical qualifications entitle him to the Degree of Medicinæ Doctor.

Given at Darn-Hall, 8th July 1796.

W. FARQUHARSON.

THESE Certificates I accordingly sent, with the usual fee, for a Diploma, to John Ewen, Esq. Castle-street, Aberdeen, as he promised me the favour of forwarding my commissions to the Professors. This gentleman, accordingly, attended to my business; and received the following letter from Dr. Bannerman.

DEAR

DEAR SIR,

YESTERDAY I took the opportunity of presenting, to a meeting of the Professors of King's College, Aberdeen, the request of Mr Heyman Lion, That he might obtain the Degree of M. D.; and, at the same time, laid before them the Certificates, Letters, &c. in his favour.

FROM the several documents concerning Mr. Lion's character, education, and professional abilities, which were presented, the Professors entertain no doubt of his medical qualifications: But, from the public line of practice which he has for some time adopted, they find, that the University, consistently with their usual forms, in matters of this sort, cannot grant the Degree requested.—I am,

Dear Sir,

Your very humble servant,

BANNERMAN, M. D.

THE above Letter is the most convincing proof of the respect these gentlemen pay to my Business, which, in their opinion, is so degrading, as to render me unworthy of a Degree. If I could have found as many Cata-racts as Spinæ, I would have been an Oculist, which perhaps would have been, by them, considered more respectable. But as this could not be found, I think it was in no sense disgraceful: On the contrary, I always considered my Business to be as genteel and creditable as any other.

I HAVE had the honour of attending ladies and gentlemen, in the most elevated ranks, from whom I received the most satisfactory recommendations, which is a certain proof of their good wishes, and my successful practice.

F I N I S.

EDINBURGH:  
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